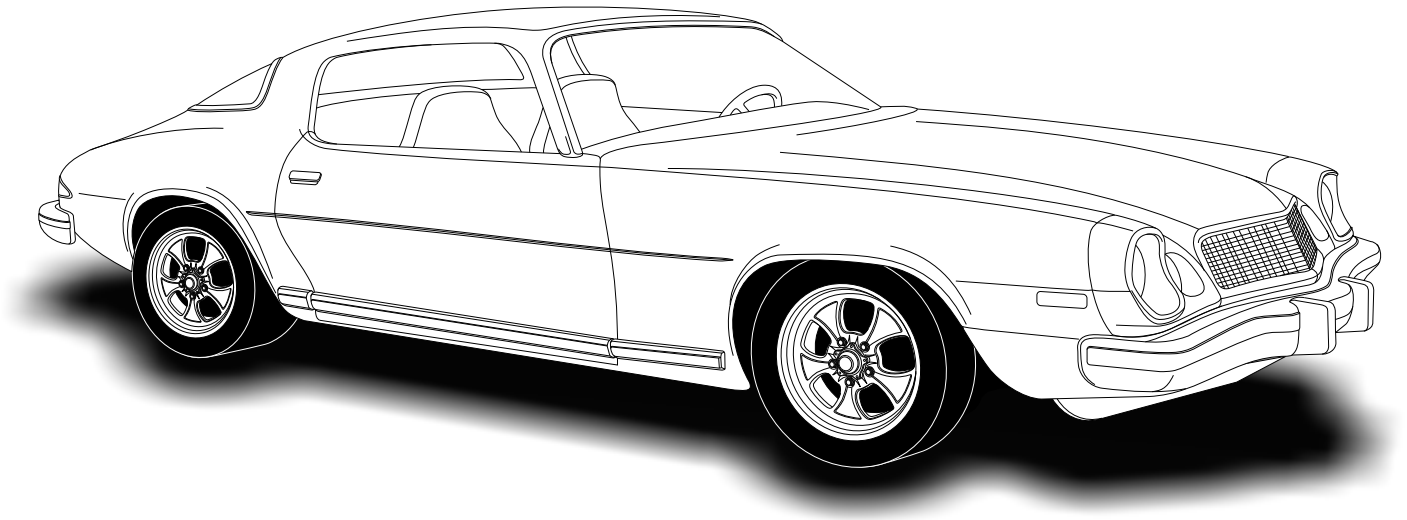
200 MPH AIR CONDITIONING

SINCE Vintage Air 1976

1970-78 CHEVY CAMARO

w/ FACTORY AIR GEN IV

565070



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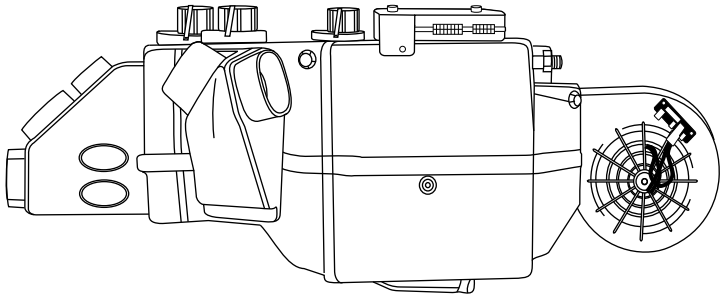
EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT
565070

No.	QTY.	PART No.	DESCRIPTION
1.	1	762170	1970-78 CAMARO w/ AC GEN IV EVAP. SUBCASE
2.	1	781172	1970-78 CAMARO w/ AC GEN IV ACC. KIT

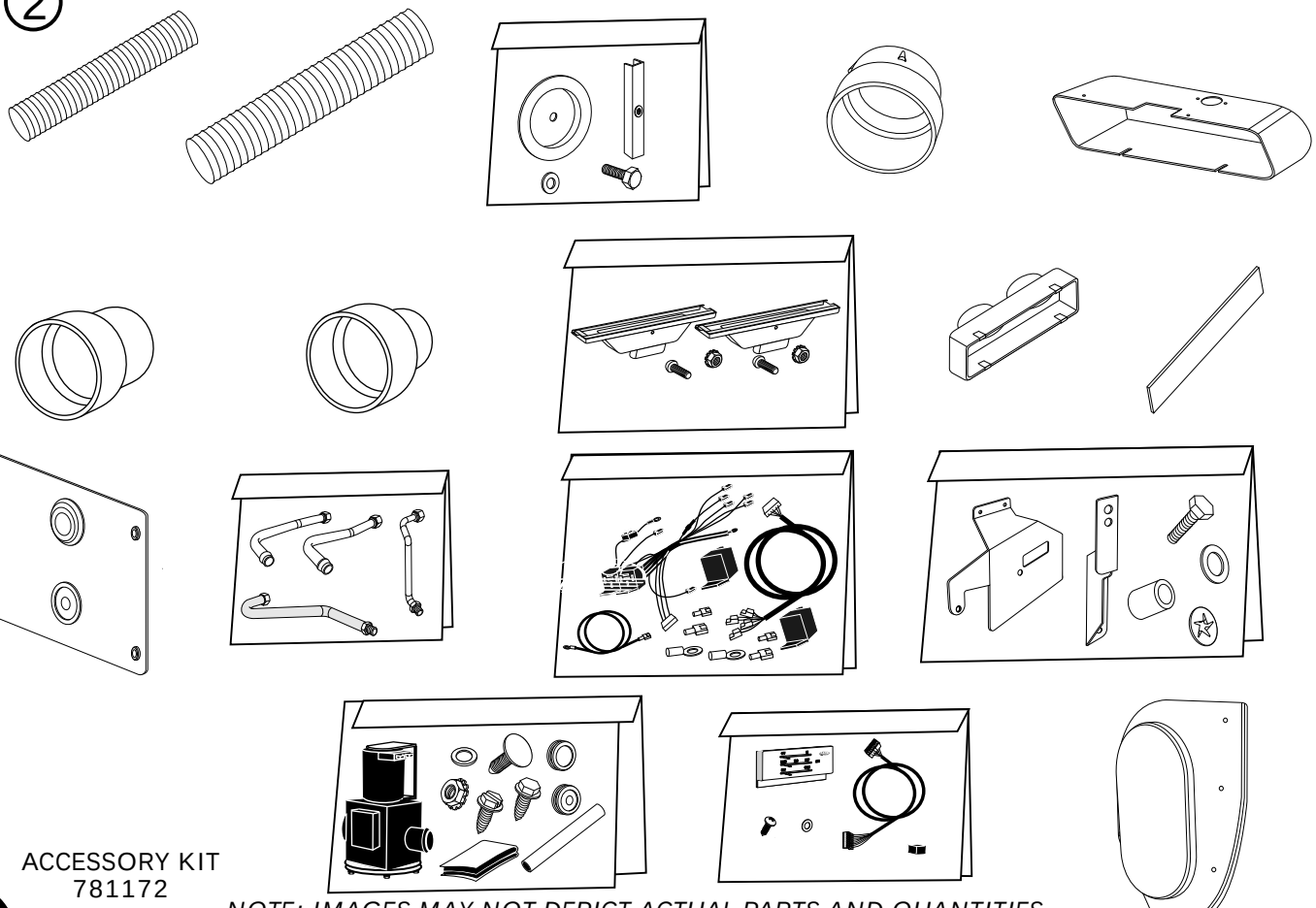
*** BEFORE BEGINNING INSTALLATION OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.*

①



1970-78 CAMARO *w/ AC* GEN IV EVAP. SUB CASE
762170

②



ACCESSORY KIT
781172

NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES. REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES

1970-78 CAMARO
w/ FACTORY AIR

IMPORTANT NOTICE-PLEASE READ

FOR MAXIMUM SYSTEM PERFORMANCE VINTAGE AIR RECOMMENDS THE FOLLOWING:

THIS KIT DOES NOT CONTAIN HEATER HOSE. YOU MUST PURCHASE 8 FEET OF 5/8" DIA. HEATER HOSE FROM VINTAGE AIR(31800-VUD) OR FROM YOU LOCAL PARTS RETAILER

SAFETY SWITCHES:

YOUR VINTAGE AIR SYSTEM IS EQUIPPED WITH A BINARY PRESSURE SAFETY SWITCH. A BINARY SWITCH (11078-VUS) DISENGAGES THE COMPRESSOR CLUTCH IN CASE OF EXTREME LOW PRESSURE CONDITION (REFRIGERANT LOSS) OR EXCESSIVELY HIGH HEAD PRESSURE (406 PSI), TO PREVENT COMPRESSOR DAMAGE OR HOSE RUPTURE. A TRINARY SWITCH (11076-VUS) COMBINES HI/LO PRESSURE PROTECTION WITH AN ELECTRIC FAN OPERATION SIGNAL AT 254 PSI., AND MAY BE SUBSTITUTED FOR USE WITH ELECTRIC CONDENSER FANS. COMPRESSOR SAFETY SWITCHES ARE EXTREMELY IMPORTANT SINCE AN A/C SYSTEM RELIES ON REFRIGERANT TO CARRY LUBRICATION THROUGH THE SYSTEM.

SERVICE INFO:

ATTENTION: SYSTEM COMPONENTS: THE COMPRESSOR, EVAPORATOR, CONDENSER & DRIER ARE CAPPED. CAPS MAY BE UNDER PRESSURE WITH DRY NITROGEN; BE CAREFUL REMOVING CAPS. DO NOT REMOVE CAPS PRIOR TO INSTALLATION. REMOVING CAPS PRIOR TO INSTALLATION WILL CAUSE COMPONENTS TO COLLECT MOISTURE AND LEAD TO PREMATURE FAILURE AND REDUCED PERFORMANCE.

EVACUATE THE SYSTEM FOR 35-45 MINUTES WITH SYSTEM COMPONENTS (DRIER, COMPRESSOR, EVAPORATOR AND CONDENSER) AT A TEMPERATURE OF AT LEAST 85° F. ON A COOL DAY THE COMPONENTS CAN BE HEATED WITH A HEAT GUN OR BY RUNNING THE ENGINE WITH THE HEATER ON BEFORE EVACUATING. LEAK CHECK AND CHARGE TO SPECIFICATIONS.

VINTAGE AIR SYSTEMS ARE DESIGNED TO OPERATE WITH R134a or R-12 REFRIGERANT ONLY ! USE OF ANY OTHER REFRIGERANTS RISKS A DANGER OF FIRE AND COULD DAMAGE EITHER YOUR AIR CONDITIONING SYSTEM OR YOUR VEHICLE.

USE OF ANY OTHER REFRIGERANTS WILL VOID ALL WARRANTIES OF THE AIR CONDITIONING SYSTEM AND COMPONENTS. USE OF THE PROPER TYPE AND AMOUNT OF REFRIGERANT IS CRITICAL TO PROPER SYSTEM OPERATION. VINTAGE AIR RECOMMENDS OUR SYSTEMS BE CHARGED BY WEIGHT WITH A QUALITY CHARGING STATION OR SCALE.

REFRIGERANT CAPACITIES FOR VINTAGE AIR SYSTEMS

(FOR OTHER SYSTEMS, CONSULT MANUFACTURER GUIDELINES)

134a SYSTEM

CHARGE WITH 1.8 lbs.
(1lbs. 12ozs) OF REFRIGERANT

R-12 SYSTEM

CHARGE WITH 2.0 lbs. OF REFRIGERANT

LUBRICANT CAPACITIES: NEW COMPRESSOR - NO ADDITIONAL OIL NEEDED
USED COMPRESSOR - CONSULT VINTAGE AIR

IMPORTANT *WIRING* NOTICE-PLEASE READ

SOME VEHICLES MAY HAVE HAD SOME OR ALL OF THEIR RADIO INTERFERENCE CAPACITORS REMOVED. THERE SHOULD BE A CAPACITOR FOUND AT EACH OF THE FOLLOWING LOCATIONS:

1. ON THE POSITIVE TERMINAL OF THE IGNITION COIL
2. IF THERE IS A GENERATOR, ON THE ARMATURE TERMINAL OF THE GENERATOR
3. IF THERE IS A GENERATOR, ON THE BATTERY TERMINAL OF THE VOLTAGE REGULATOR

MOST ALTERNATORS HAVE A CAPACITOR INSTALLED INTERNALLY TO ELIMINATE WHAT IS CALLED 'WHINING' AS THE ENGINE IS REVVED. IF WHINING IS HEARD IN THE RADIO, OR JUST TO BE EXTRA CAUTIOUS, A RADIO INTERFERENCE CAPACITOR CAN BE ADDED TO THE BATTERY TERMINAL OF THE ALTERNATOR.

IT IS ALSO IMPORTANT THAT THE BATTERY LEAD IS IN GOOD SHAPE AND THAT THE GROUND LEADS ARE NOT COMPROMISED. THERE SHOULD BE A HEAVY GROUND FROM THE BATTERY TO THE ENGINE BLOCK, AND ADDITIONAL GROUNDS TO THE BODY AND TO THE CHASSIS.

IF THESE PRECAUTIONS ARE NOT OBSERVED, IT IS POSSIBLE FOR VOLTAGE SPIKES TO BE PRESENT ON THE BATTERY LEADS. THESE SPIKES COME FROM IGNITION SYSTEMS, CHARGING SYSTEMS, AND FROM TURNING SOME OF THE VEHICLE'S OTHER SYSTEMS ON AND OFF. MODERN COMPUTER OPERATED EQUIPMENT CAN BE SENSITIVE TO VOLTAGE SPIKES ON THEIR POWER LEADS, WHICH CAN CAUSE UNEXPECTED RESETS, STRANGE BEHAVIOR, AND MAY ALSO CAUSE PERMANENT DAMAGE.

VINTAGE AIR STRIVES TO HARDEN THEIR PRODUCTS AGAINST THESE TYPES OF ELECTRICAL NOISE, BUT THERE IS A POINT WHERE A VEHICLE'S ELECTRICAL SYSTEM CAN BE DEGRADED SO MUCH THAT NOTHING CAN HELP.

RADIO INTERFERENCE CAPACITORS SHOULD BE AVAILABLE AT MOST AUTO & TRUCK PARTS SUPPLIERS. THEY TYPICALLY ARE CYLINDRICAL IN SHAPE, A LITTLE OVER AN INCH LONG, A LITTLE OVER A HALF INCH IN DIAMETER, THEY HAVE A SINGLE LEAD COMING FROM ONE END OF THE CYLINDER WITH A TERMINAL ON THE END OF THE WIRE, AND THEY WILL HAVE A MOUNTING CLIP WHICH IS SCREWED INTO A GOOD GROUND ON THE VEHICLE. THE SPECIFIC VALUE OF THE CAPACITANCE IS NOT TOO SIGNIFICANT, IN COMPARISON TO IGNITION CAPACITORS THAT ARE MATCHED WITH THE COIL TO REDUCE PITTING OF THE POINTS.

- CARE MUST BE TAKEN WHEN INSTALLING THE COMPRESSOR LEAD, NOT TO SHORT IT TO GROUND. THE COMPRESSOR LEAD MUST NOT BE CONNECTED TO A CONDENSER FAN OR ANY OTHER AUXILIARY DEVICE. SHORTING TO GROUND OR CONNECTING TO A CONDENSER FAN OR ANY OTHER AUXILIARY DEVICE WILL CAUSE SEVERE DAMAGE TO THE ECU.
- WHEN INSTALLING GROUND LEADS ON GEN IV SYSTEMS, THE BLOWER CONTROL GROUND AND ECU GROUND MUST BE CONNECTED DIRECTLY TO THE NEGATIVE BATTERY POST.
- THE HEATER CONTROL VALVE IS A NORMALLY OPEN VALVE. IT MUST BE CONNECTED TO THE ECU TO BLOCK WATER FLOW IN AC MODE.

BEFORE STARTING THE INSTALLATION, CHECK THE FUNCTION OF THE VEHICLE (HORN, LIGHTS,ETC.) FOR PROPER OPERATIONS. STUDY THE INSTRUCTIONS, ILLUSTRATIONS, & DIAGRAMS.

ENGINE COMPARTMENT

REMOVE THE FOLLOWING:

- ☐ BATTERY AND BATTERY TRAY (RETAIN). SEE FIGURE 1 AND 3.
- ☐ DRAIN RADIATOR
- ☐ EVACUATE THE A/C SYSTEM IF NECESSARY.
- ☐ CONDENSER, LINES AND THE (4) OEM RUBBER WELL NUTS IN CORE SUPPORT (DISCARD). SEE FIGURE 1.
- ☐ OEM COMPRESSOR AND BRACKET (DISCARD). SEE FIGURE 2.
- ☐ EVAPORATOR AND BLOWER ASSEMBLY (DISCARD). TO REMOVE THE EVAPORATOR AND BLOWER ASSEMBLY (UNDER HOOD) AND THE AIR DISTRIBUTION SYSTEM (UNDER DASH), THE FACTORY MANUAL INDICATES DOING THE FOLLOWING: *"REMOVE RIGHT LOWER ROCKER MOLDING. REMOVE LOWER FENDER ATTACHING BOLTS. REMOVE SKIRT TO FENDER AND SKIRT TO REINFORCEMENT SCREWS. PULL OUT ON LOWER PORTION OF FENDER, MOVING THE SKIRT AWAY FROM THE FENDER FLANGE AND FIREWALL. BLOCK THE SKIRT WITH A 2 x 4 BLOCK OF WOOD".** TO AVOID DAMAGE TO PAINT AND SHEET METAL, AND FOR EASE OF REMOVAL AND REPLACEMENT OF COMPONENTS; VINTAGE AIR SUGGESTS THAT THE RIGHT FENDER BE REMOVED AND INNER PANEL BE LOWERED. SEE FIGURE 3.
- ☐ OEM HEATER HOSES, A/C HOSES, HARDLINES AND DRIER (DISCARD). SEE FIGURE 4.
- ☐ REMOVE OEM A/C & HEATER WIRING/VACUUM HARNESS MOLDED GROMMET. SEE FIGURE 4.
- ☐ INSTALL 1 ½" PLUG IN FIREWALL. SEE FIGURE 4a BELOW.

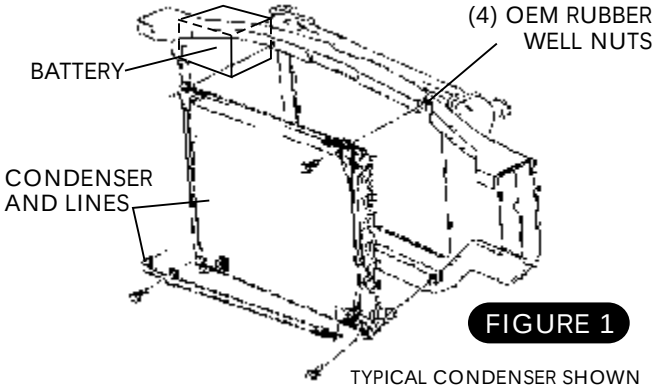


FIGURE 1

TYPICAL CONDENSER SHOWN

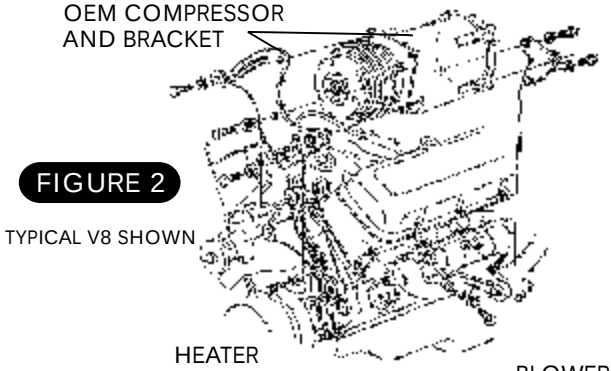


FIGURE 2

TYPICAL V8 SHOWN

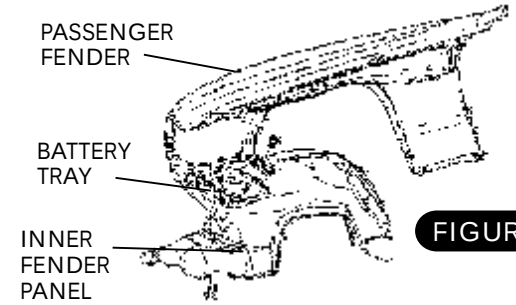


FIGURE 3

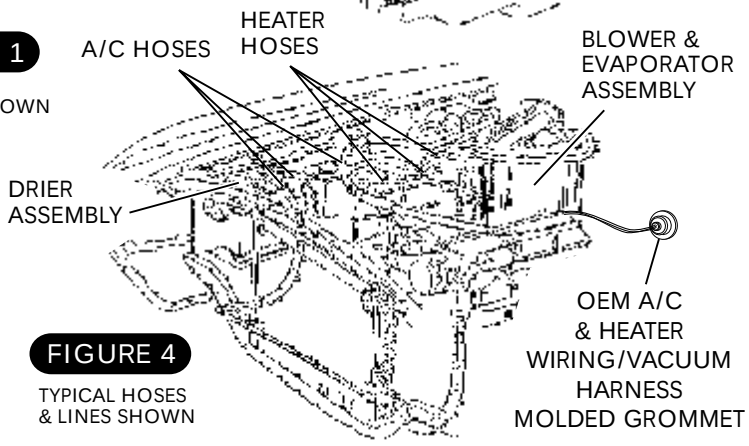


FIGURE 4

TYPICAL HOSES & LINES SHOWN

CONDENSER ASSEMBLY & INSTALLATION

- ☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE CONDENSER KIT TO INSTALL THE CONDENSER.
- ☐ BINARY SWITCH INSTALLATION (REFER TO CONDENSER INSTRUCTIONS)

COMPRESSOR & BRACKETS

- ☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE BRACKET KIT TO INSTALL THE COMPRESSOR BRACKET.

PULLEYS

- ☐ IN MOST INSTANCES THE BELT LENGTHS WILL REMAIN THE SAME.

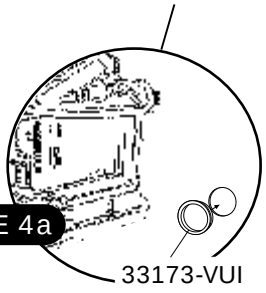


FIGURE 4a

PASSENGER COMPARTMENT

NOTE: REMOVAL OF DASHBOARD REQUIRED TO INSTALL THE EVAPORATOR. VINTAGE AIR RECOMMENDS THAT YOU UTILIZE THE FACTORY SERVICE MANUAL WHEN YOU DISASSEMBLE AND REASSEMBLE THE DASHBOARD.

REMOVE THE FOLLOWING:

- ☐ GLOVE BOX DOOR. SEE FIGURE 6.
- ☐ GLOVE BOX SHELL (DISCARD, RETAIN SCREWS). SEE FIGURE 5.
- ☐ AC/HEATER/EVAPORATOR ASSEMBLY AND ALL RELATED DUCTING (DISCARD), RETAIN SCREWS. SEE FIGURE 6.
- ☐ A/C HEAT OUTLETS (RETAIN). INSTRUMENT PANEL MUST BE REMOVED TO GET TO LEFT OUTLET, AND CONTROL PANEL (SEE FIGURE 6).
- ☐ CONTROL PANEL ASSEMBLY (RETAIN CONTROL PANEL) SEE FIGURE 6. REFER TO CONTROL PANEL CONVERSION KIT INSTRUCTIONS FOR INSTALLTION OF CONTROLS.
- ☐ REMOVE PASSENGER SIDE KICK PANEL FRESH AIR COVER (DISCARD) AND KICK PANEL (RETAIN). REMOVE CABLE (DISCARD) FROM PANEL (SEE FIGURE 6).
- ☐ REMOVE OEM DEFROST DUCT ASM.

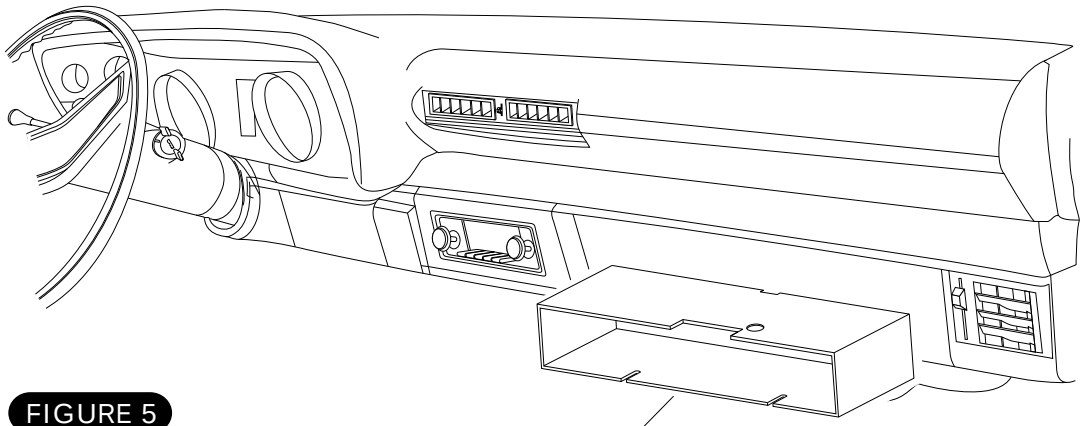


FIGURE 5

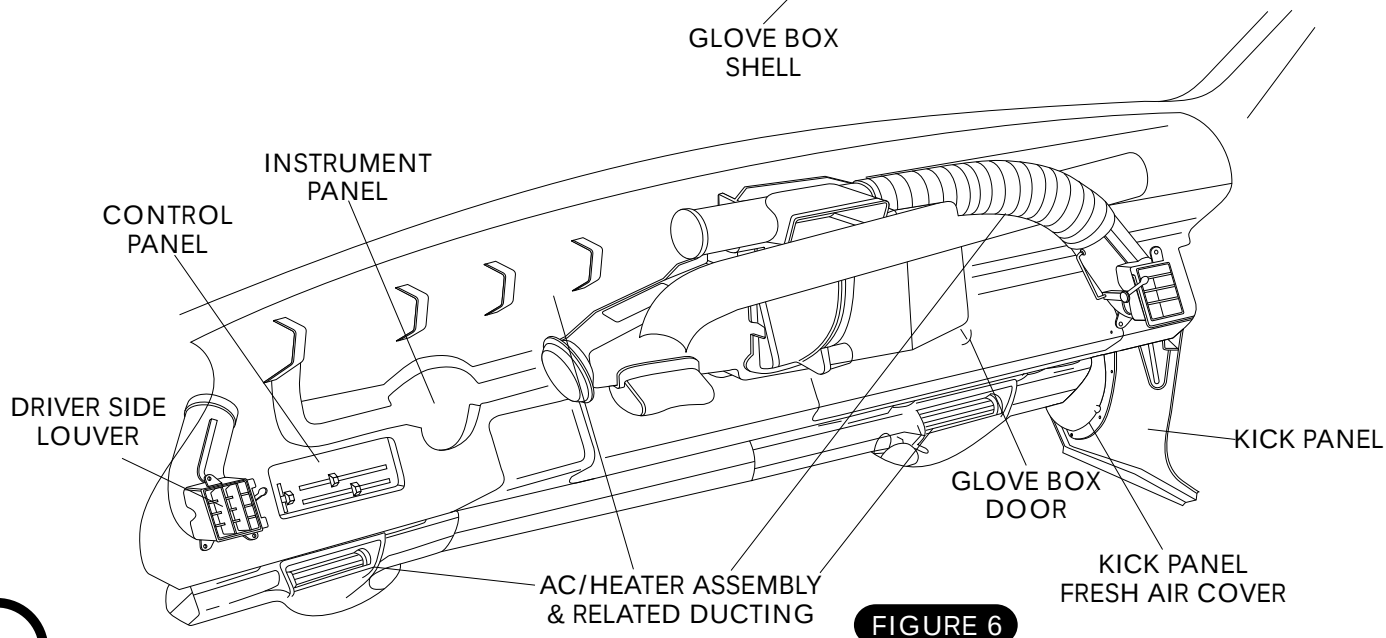


FIGURE 6

EVAPORATOR MOUNTING HOLES

- ☐ LOOSEN WIRE LOOM MOUNTING SCREW. SEE FIGURE 7 BELOW
- ☐ CUT OUT TEMPLATE PROVIDED ON PAGE 25. SLIDE THE TOP OF TEMPLATE UNDER WIRE LOOM ON INNER COWL. ALIGN THE HOLE IN TEMPLATE WITH THE OEM HOLE IN INNER COWL. ALIGN BOTTOM EDGE OF THE TEMPLATE ALONG THE BOTTOM EDGE OF INNER COWL AS SHOWN BELOW IN FIGURE 7.
- ☐ ONCE TEMPLATE IS ALIGNED CORRECTLY AND TAPED INTO PLACE MARK MOUNTING HOLES ON INNER COWL. ONCE HOLES ARE MARKED IN THE CORRECT LOCATION REMOVE TEMPLATE, AND DRILL (2) 3/16" HOLES IN INNER COWL FOR EVAPORATOR FRONT MOUNTING BRACKET. SEE FIGURE 7 BELOW.
- ☐ RE-TIGHTEN WIRE LOOM MOUNTING SCREW.

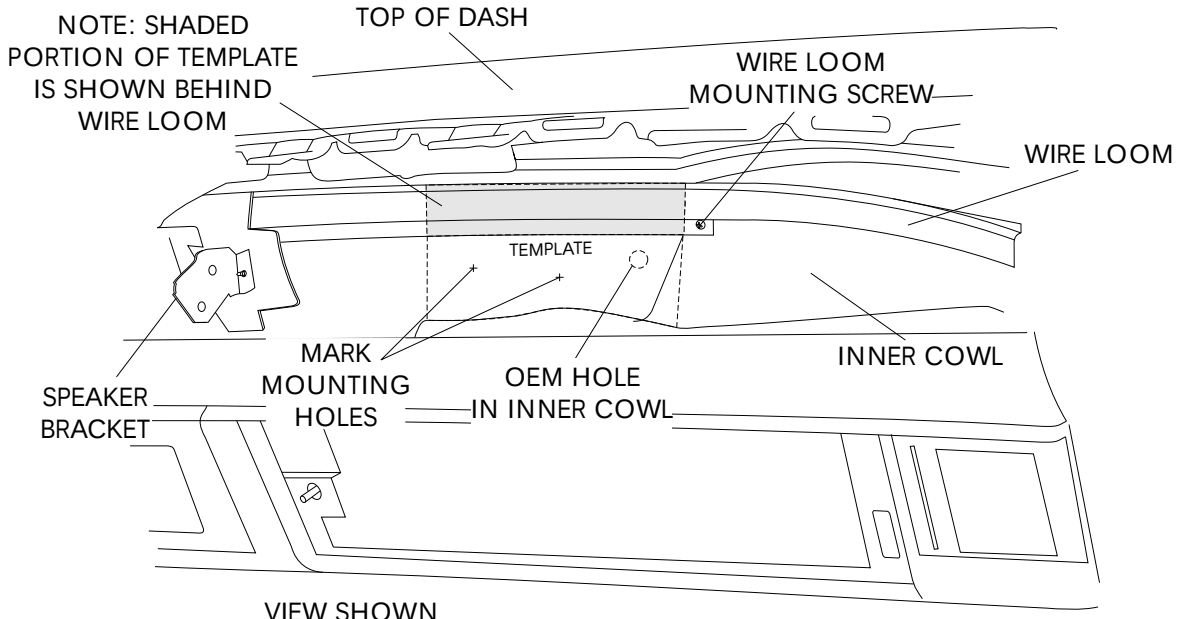


FIGURE 7

VIEW SHOWN THROUGH DASH

DEFROST DUCT INSTALLATION

- ☐ INSTALL THE DEFROST DUCTS UNDER DASH ON OEM DEFROST DUCT MOUNTING FLANGE AS SHOWN IN FIGURE 8 BELOW. SECURE USING 10/24 x 3/8" PAN HEAD SCREW AND 10/24 NUT w/ STAR WASHER.

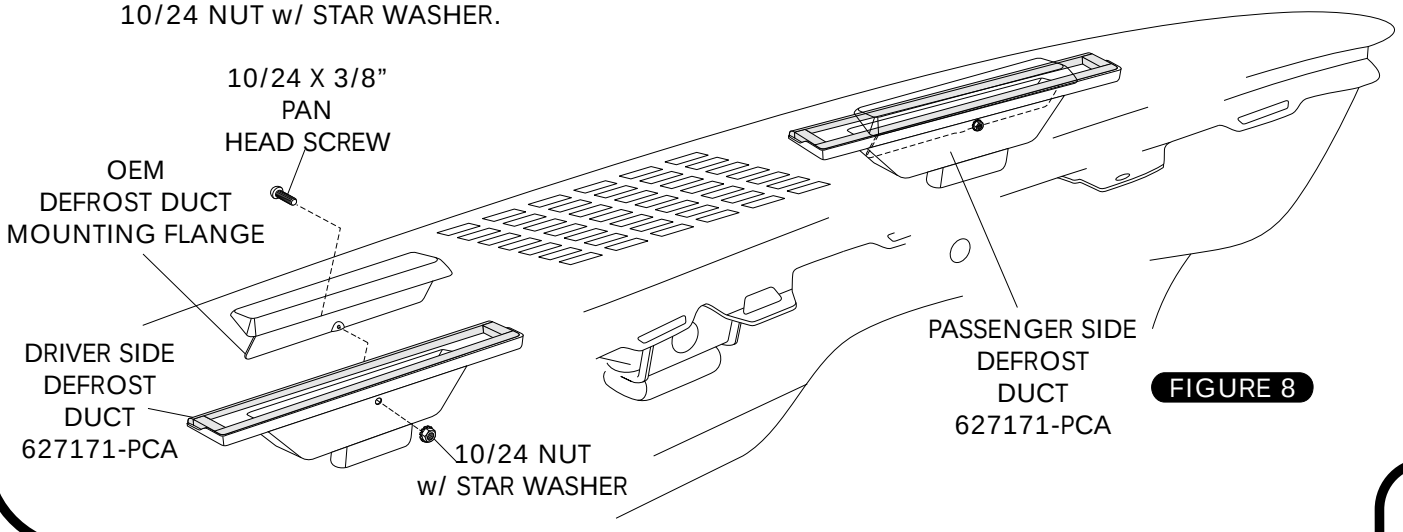

10/24 X 3/8" PAN HEAD SCREW
OEM DEFROST DUCT MOUNTING FLANGE
DRIVER SIDE DEFROST DUCT 627171-PCA
10/24 NUT w/ STAR WASHER
PASSENGER SIDE DEFROST DUCT 627171-PCA

FIGURE 8

HOSE ADAPTER INSTALLATION

- ☐ INSTALL S-CLIPS ON HOSE ADAPTERS AS SHOWN IN FIGURE 9 BELOW.
- ☐ INSTALL DRIVER & PASSENGER SIDE HOSE ADAPTERS ON OEM LOUVERS. SEE FIGURE 9 BELOW

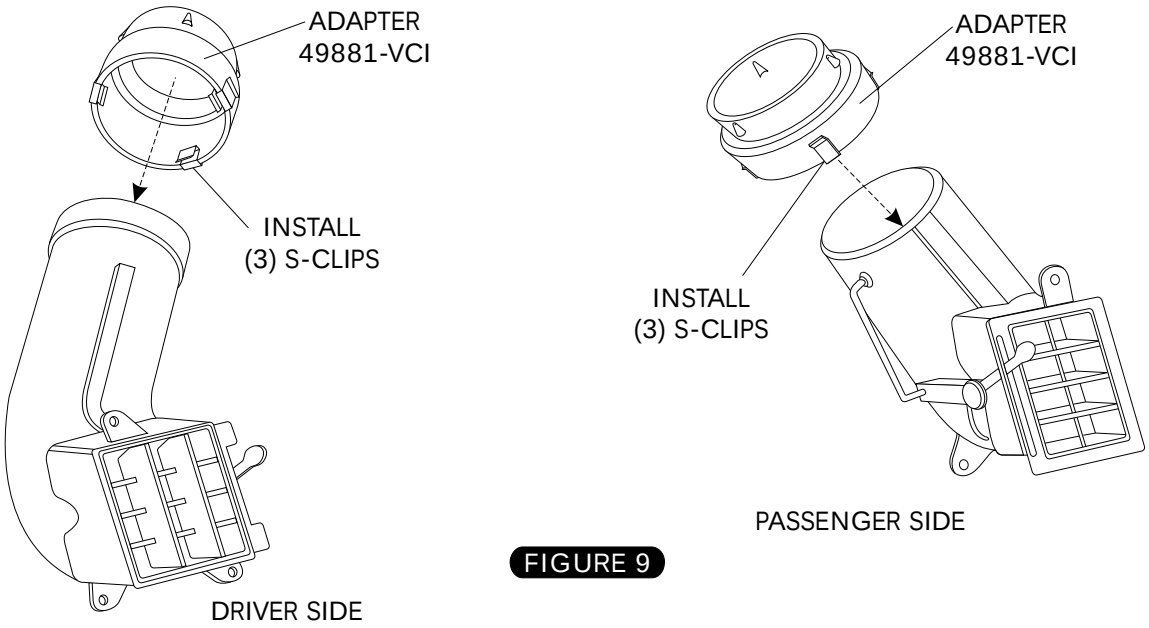


FIGURE 9

FRESH AIR COVER INSTALLATION

- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FRESH AIR CAP AS SHOWN IN FIGURE 10, BELOW.
- ☐ ATTACH FRESH AIR CAP TO FIREWALL USING A 1/4-20 x 1" BOLT AND WASHER, SEE FIGURE 10, BELOW.(NOTE: FRESH AIR CAP INSTALLS ON ENGINE SIDE OF FIREWALL.)
- ☐ DRILL 5/8" HOLE IN FIREWALL AS SHOWN IN FIGURE 10 BELOW. INSTALL GROMMET AS SHOWN IN FIGURE 12, PAGE 11.

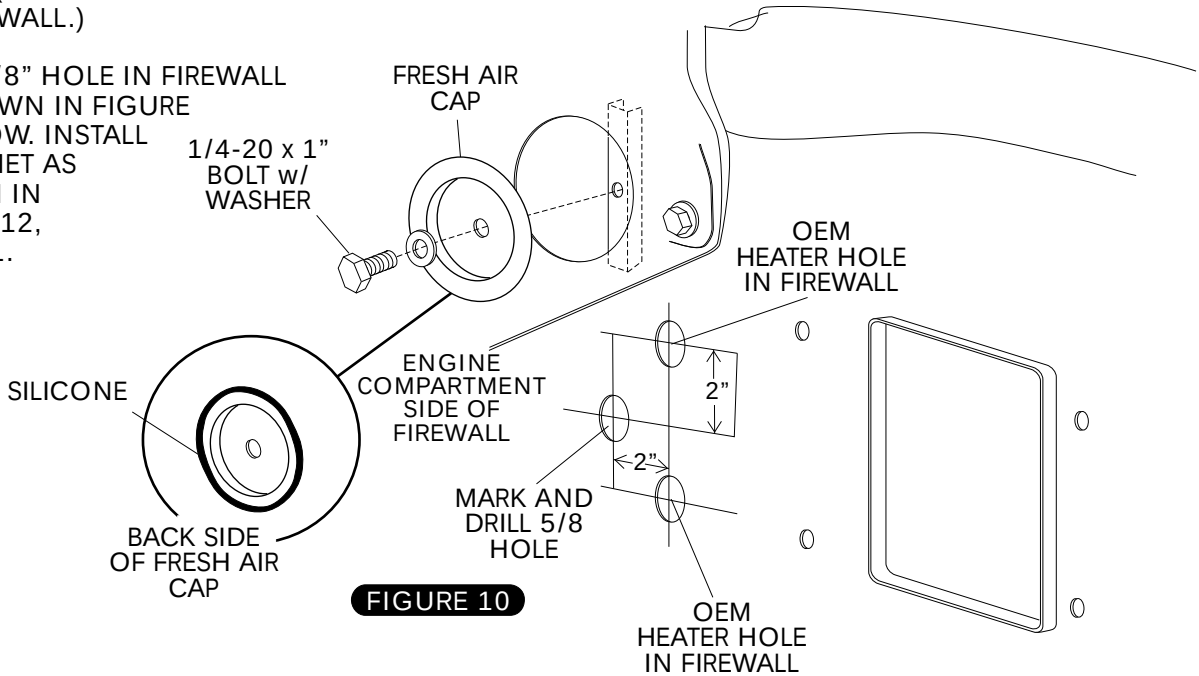


FIGURE 10

KICK PANEL CAP INSTALLATION

- ☐ CLOSE FRESH AIR DOOR ASSEMBLY IN KICK PANEL AND SEAL DOOR w/ 1/4" BEAD OF SILICONE AROUND DOOR AS SHOWN IN FIGURE 10a BELOW.

- ☐ INSTALL KICK PANEL CAP USING (5) #10 x 1" PAN HEAD SCREWS AS SHOWN IN FIGURE 10b.

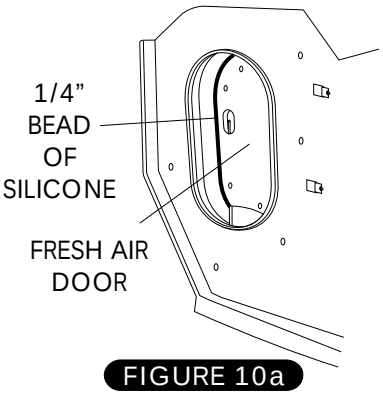


FIGURE 10a

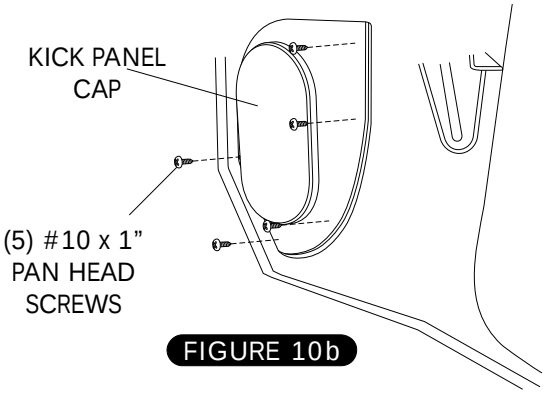


FIGURE 10b

FIREWALL COVER INSTALLATION

- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER AS SHOWN IN FIGURE 12, PAGE 11.

- ☐ FROM INSIDE THE CAR, INSTALL FIREWALL COVER ON FIREWALL SEE FIGURE 12, PAGE 11. FROM THE ENGINE COMPARTMENT SECURE FIREWALL COVER TO FIREWALL USING (4) 1/4-20 x 1" HEX BOLTS WITH WASHER. SEE FIGURE 12, PAGE 11

EVAPORATOR INSTALLATION

- ☐ ON A WORK BENCH, INSTALL EVAPORATOR REAR BRACKET AND HARDLINES WITH PROPERLY LUBRICATED O-RINGS. (SEE FIGURE 18, PAGE 14, AND FIGURES 24, PAGE 19.)

- ☐ INSTALL FRONT MOUNTING BRACKET ON EVAPORATOR USING (2) 1/4-20 x 1/2" HEX BOLTS AND TIGHTEN AS SHOWN IN FIGURE 11 BELOW.

- ☐ LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD SEE FIGURE 13, PAGE 11. SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE USING A 1/4-20 NUT AND WASHER, SEE FIGURE 13, PAGE 11.

- ☐ USING (2) #14 x 3/4" SHEETMETAL SCREW SECURE THE FRONT EVAPORATOR MOUNTING BRACKET TO THE INNER COWL. SEE FIGURE 13, PAGE 11.

- ☐ VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH, THEN TIGHTEN ALL MOUNTING BOLTS. (*NOTE: TIGHTEN THE BOLT ON FIREWALL FIRST, THEN THE FRONT MOUNTING BRACKET SCREWS.)*

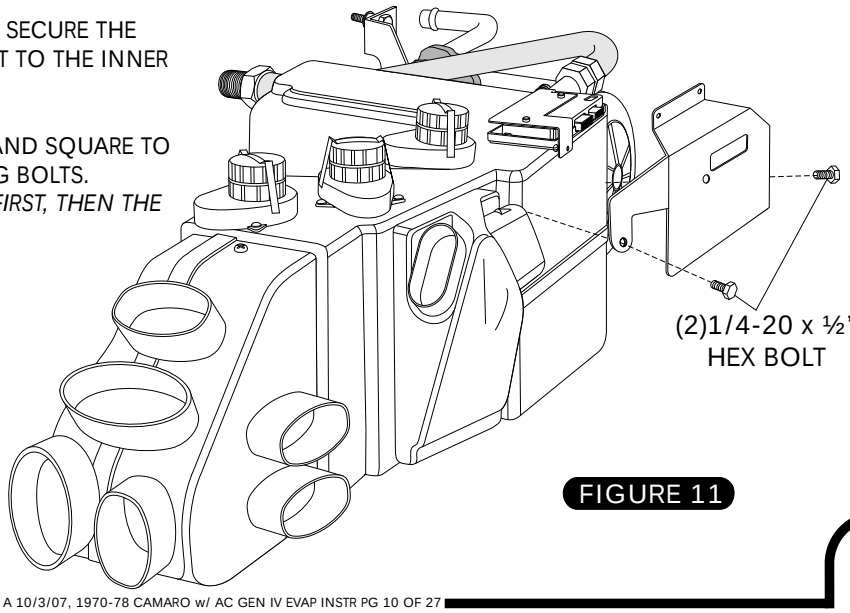


FIGURE 11

FIREWALL COVER INSTALLATION

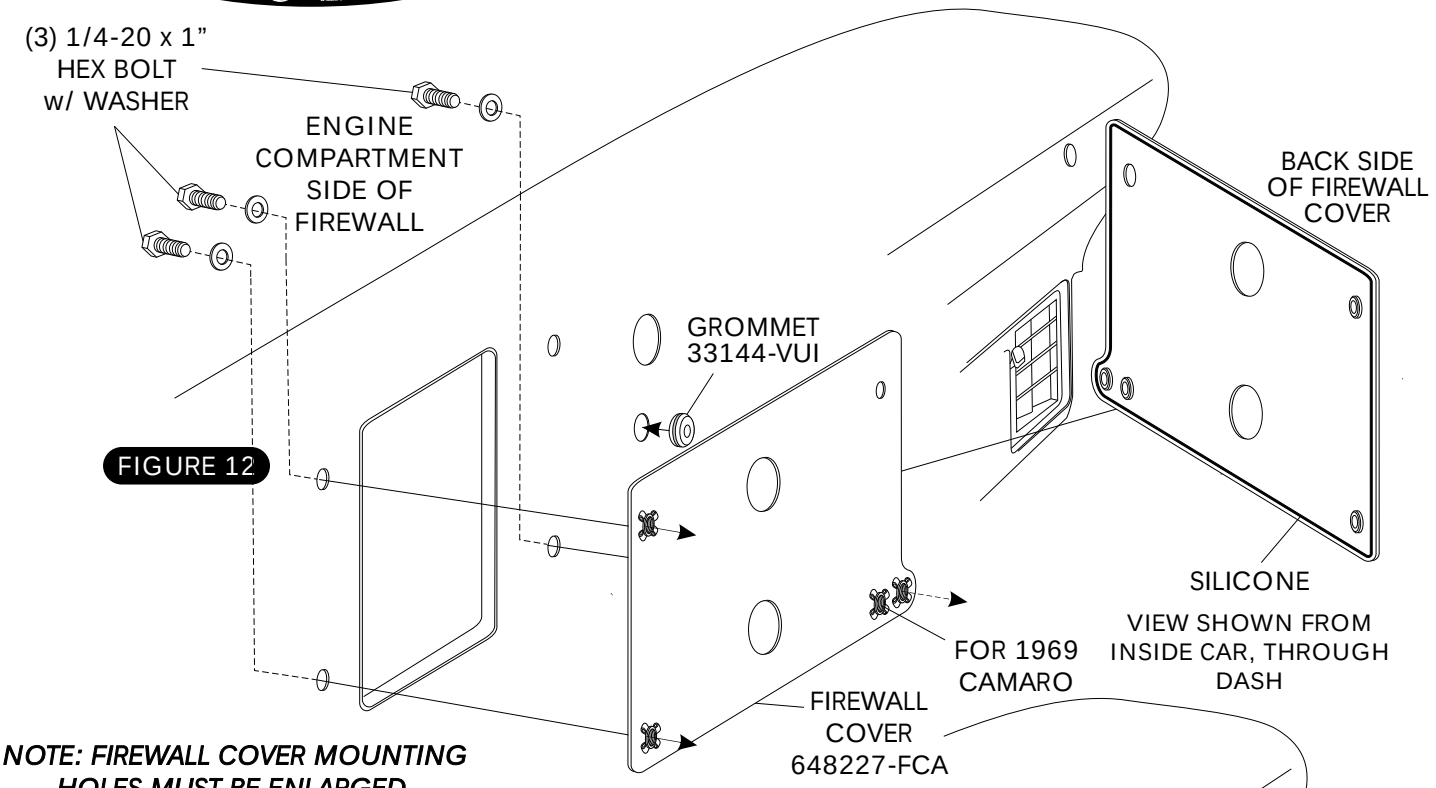

(3) 1/4-20 x 1" HEX BOLT w/ WASHER
ENGINE COMPARTMENT SIDE OF FIREWALL
BACK SIDE OF FIREWALL COVER
GROMMET 33144-VUI
SILICONE
VIEW SHOWN FROM INSIDE CAR, THROUGH DASH
FOR 1969 CAMARO
FIREWALL COVER 648227-FCA

FIGURE 12

NOTE: FIREWALL COVER MOUNTING HOLES MUST BE ENLARGED, ENLARGE EXISTING HOLES IN FIREWALL TO 5/16"

EVAPORATOR INSTALLATION

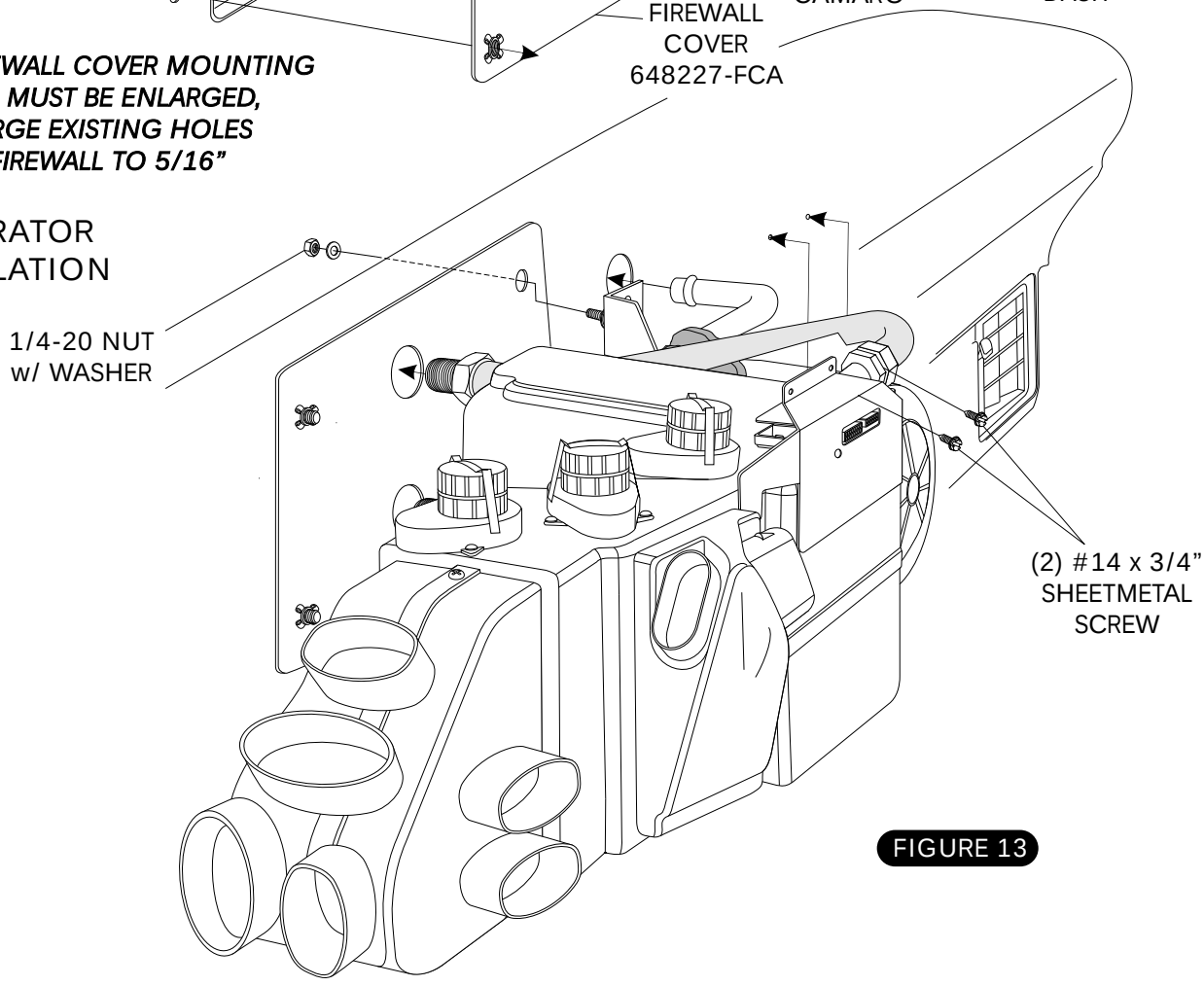


FIGURE 13

CENTER LOUVER INSTALLATION

- ☐ INSTALL FOAM STRIP ON CENTER LOUVER ASSEMBLY AS SHOWN IN FIGURE 14 BELOW.
- ☐ INSTALL CENTER LOUVER DUCT HOSE ADAPTER ON CENTER LOUVER ASSEMBLY. SEE FIGURE 14.
- ☐ USING THE (2) MOUNTING HOLES ON THE BOTTOM SIDE OF THE DUCT HOSE ADAPTER AS A GUIDE DRILL (2) 1/8" HOLES IN LOUVER ASSEMBLY. SECURE DUCT HOSE ADAPTER TO LOUVER ASSEMBLY USING (2) #8 x ½" PAN HEAD SCREWS. SEE FIGURE 14a, BELOW.
- ☐ RE-INSTALL DASH.

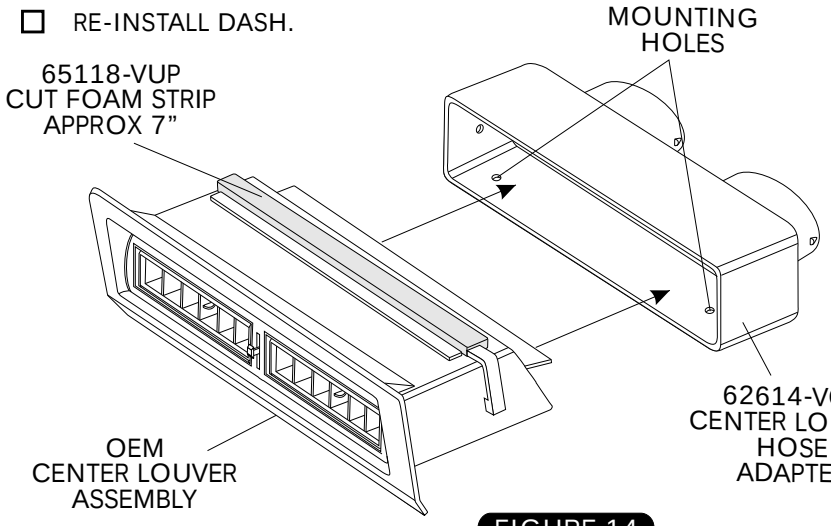


FIGURE 14

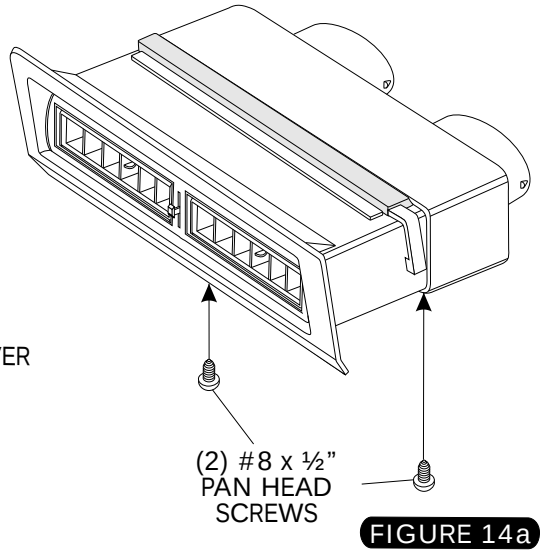


FIGURE 14a

- ☐ PULL CENTER LOUVER DUCT HOSES THROUGH DASH AND ATTACH TO CENTER LOUVER DUCT HOSE ADAPTER AS SHOWN IN FIGURE 15 BELOW.
- ☐ INSTALL CENTER LOUVER ASSEMBLY IN DASH, USING OEM MOUNTING SCREWS SECURE LOUVER ASSEMBLY TO DASH. SEE FIGURE 15.

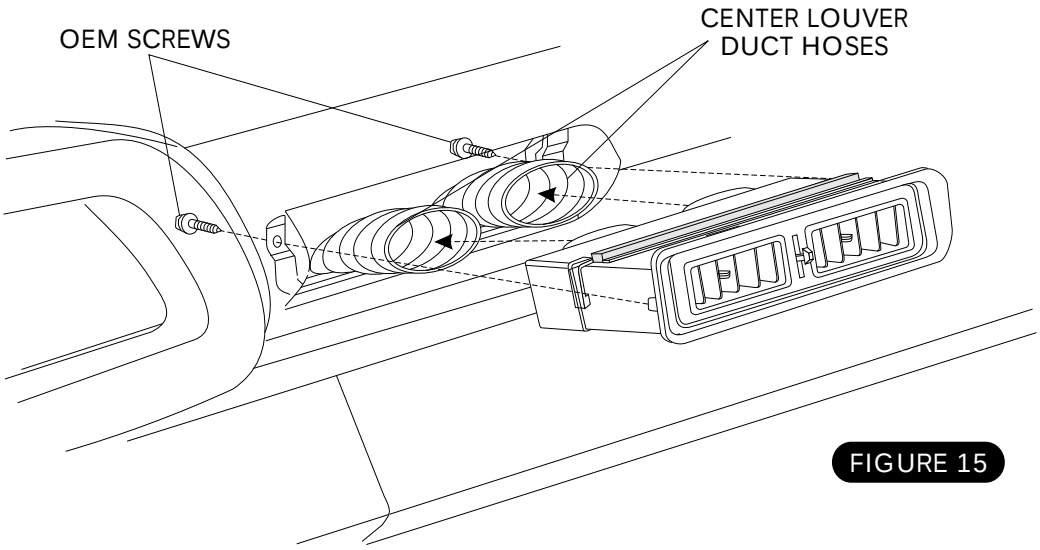


FIGURE 15

DRAIN HOSE INSTALLATION

- ☐ LOCATE EVAPORATOR DRAIN ON BOTTOM OF EVAPORATOR CASE
- ☐ IN-LINE WITH THE DRAIN, LIGHTLY MAKE A MARK ON THE FIREWALL. MEASURE ONE INCH DOWN AND DRILL A 5/8" HOLE THROUGH THE FIREWALL. SEE FIGURE 16.
- ☐ INSTALL DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT AND ROUTE THROUGH FIREWALL. SEE FIGURE 16.

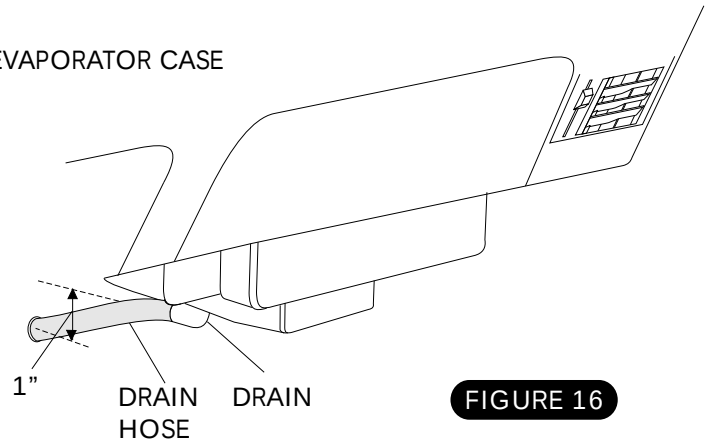


FIGURE 16

UNDER DASH LOUVER DUCT HOSE ADAPTER INSTALLATION

- ☐ INSTALL HOSE ADAPTERS AS SHOWN IN FIGURE 17 BELOW.
- ☐ ONCE HOSE ADAPTERS ARE INSTALLED THEN DRILL (2) 7/64" HOLES IN OEM UNDER DASH LOUVER ASSEMBLIES AS SHOWN IN FIGURE 17a BELOW.

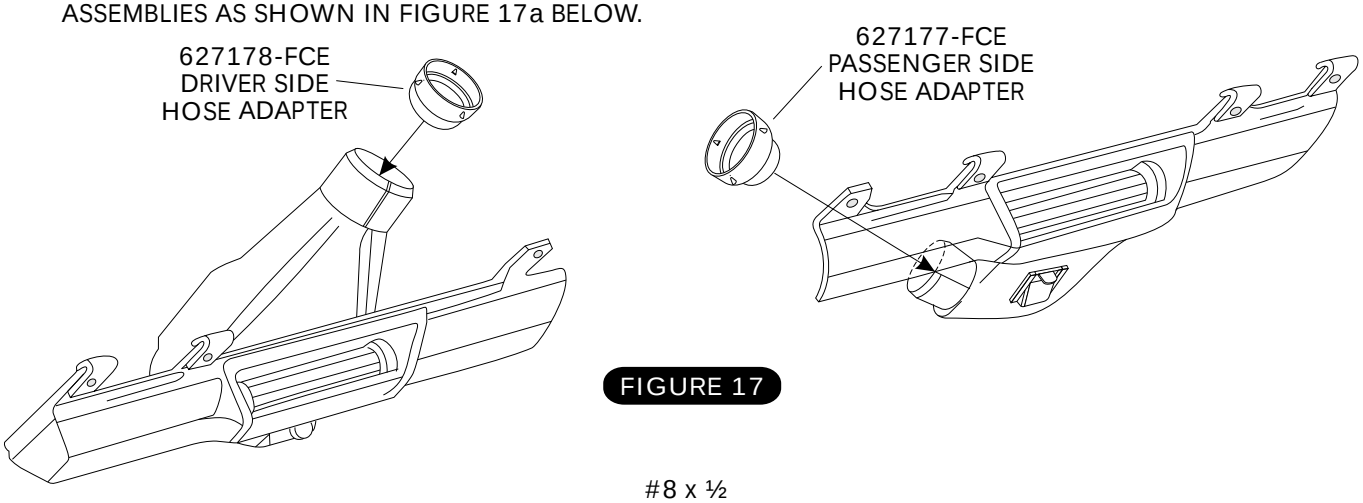


FIGURE 17

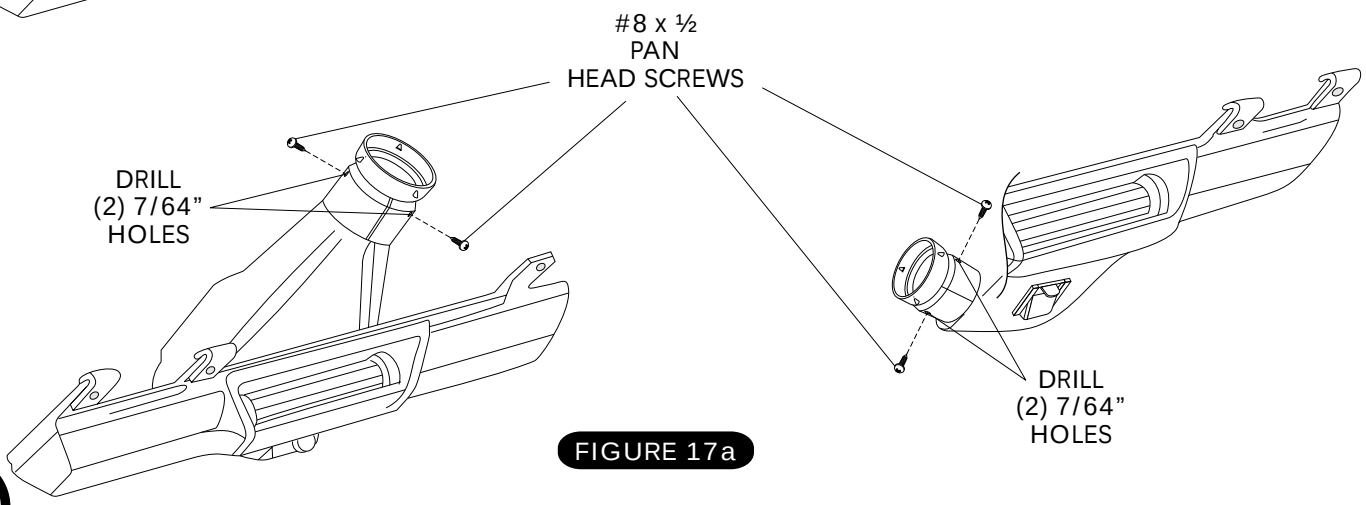


FIGURE 17a

LUBRICATING O-RINGS

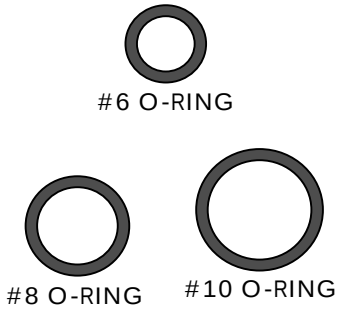
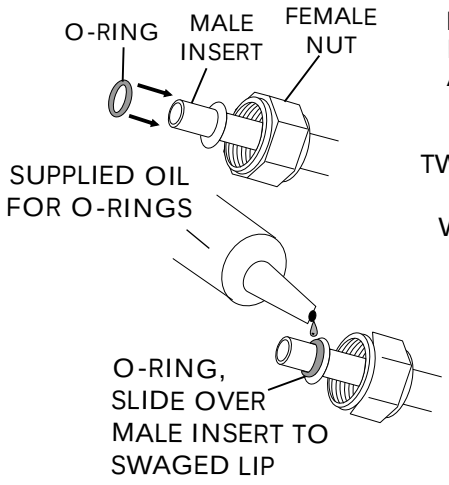
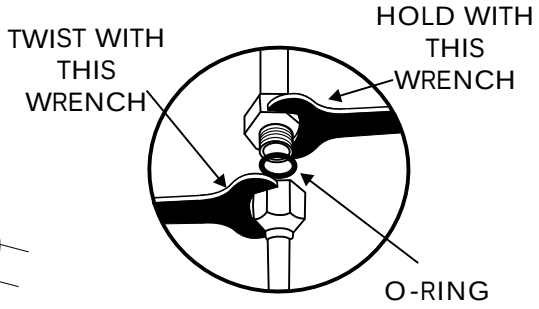


FIGURE 18



FOR A PROPER SEAL OF FITTINGS: INSTALL SUPPLIED O-RINGS AS SHOWN AND LUBRICATE WITH SUPPLIED OIL.



STANDARD HOSE KIT

☐ LOCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 18, ABOVE) AND CONNECT THE 135° w/ 134a SERVICE PORT FITTING TO THE #8 DISCHARGE PORT ON THE COMPRESSOR. ROUTE THE STRAIGHT MALE FITTING TO THE #8 CONDENSER HARDLINE COMING THROUGH THE RADIATOR CORE SUPPORT. SEE FIGURE 20, PAGE 16. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 18 ABOVE.

☐ LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS AND CONNECT THE 135° FITTING TO THE #10 SUCTION PORT ON THE COMPRESSOR, ROUTE THE 45° FEMALE w/ 134a SERVICE PORT FITTING TO THE #10 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURES 19, PAGE 15 & FIGURE 20, PAGE 16. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 18.
(NOTE: WRAP THE #10 FITTING CONNECTIONS WITH PRESS TAPE. SEE FIGURE 19a, PAGE 15.

☐ LOCATE THE #6 EVAP/DRIER HARDLINE AND LUBRICATE (2) #6 O-RINGS AND CONNECT THE HARDLINE TO THE #6 HARDLINE ON FENDERWELL COMING FROM DRIER. ATTACH THE OTHER END OF THE HARDLINE WITH LUBRICATED O-RING TO THE #6 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURES 19, PAGE 15 & FIGURE 20, PAGE 16. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 18, ABOVE.

☐ USE A #2 ADEL CLAMP TO SECURE THE #6 EVAP/CORE HARDLINE TO THE INNER FENDERWELL AS SHOWN IN FIGURE 20b, PAGE 16. SECURE THE ADEL CLAMP TO THE INNER FENDER USING A 10-32 x ½" PAN HEAD SCREW w/ NUT.

MODIFIED A/C HOSE KIT

☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH MODIFIED HOSE KIT.

HEATER HOSE & HEATER CONTROL VALVE INSTALLATION

- ☐ ROUTE A PIECE OF HEATER HOSE FROM THE WATER PUMP TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 19, BELOW. SECURE USING HOSE CLAMPS.

- ☐ ROUTE A PIECE OF HEATER HOSE FROM THE INTAKE TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 19, ELOW. NOTE: INSTALL HEATER CONTROL VALVE IN-LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE, SECURE USING HOSE CLAMPS AS SHOWN IN FIGURE 19, BELOW. *NOTE PROPER FLOW DIRECTION.)* SECURE THE # 10 SUCTION HOSE AND THE #6 EVAP HARDLINE TO THE INNER FENDER USING A #4 & #2 ADEL CLAMP. SECURE CLAMPS USING A 10-32 x ½" PAN HEAD SCREW w/ NUT. SEE FIGURE 20a, PAGE 16.

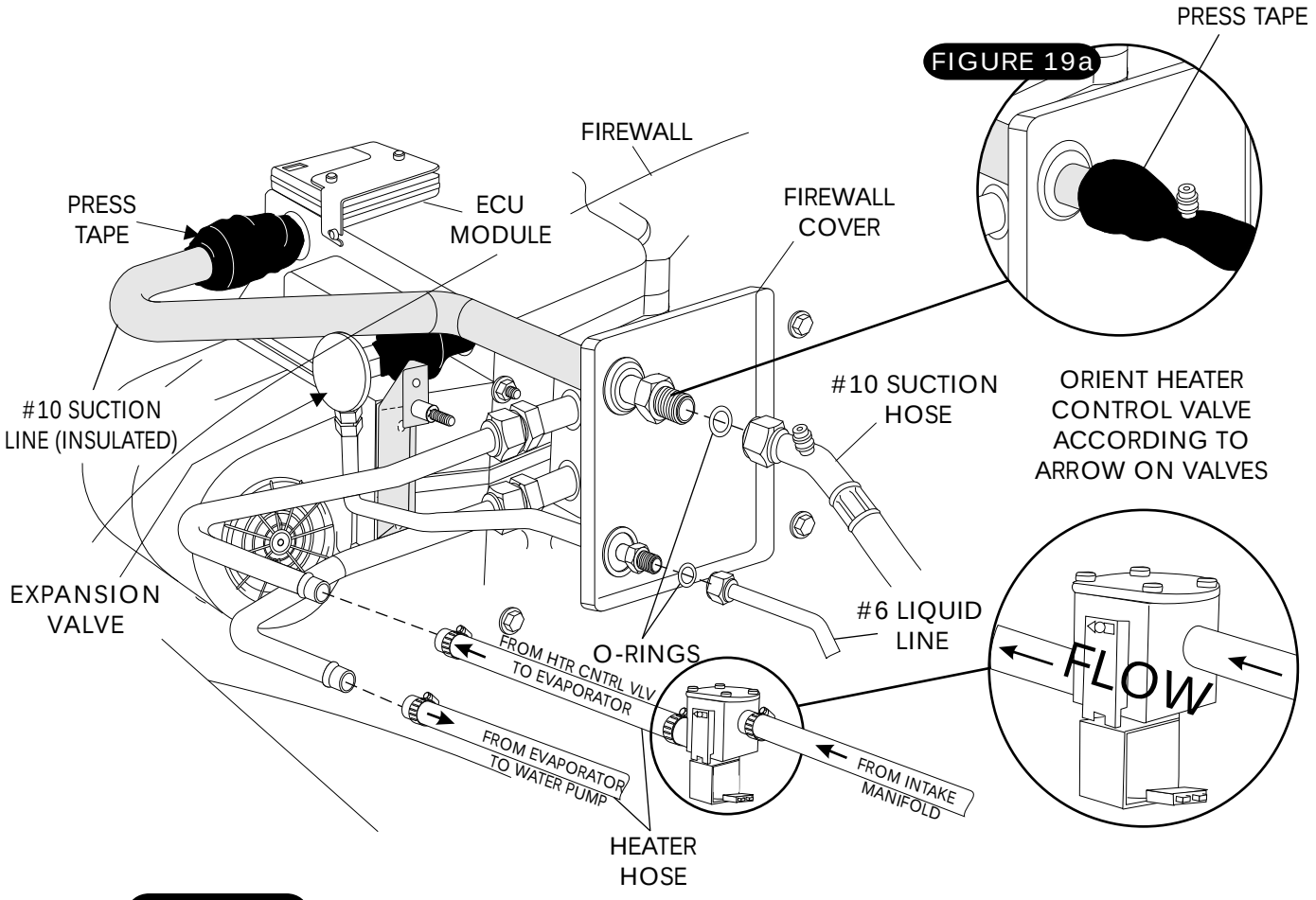


FIGURE 19

AC & HEATER HOSE ROUTING

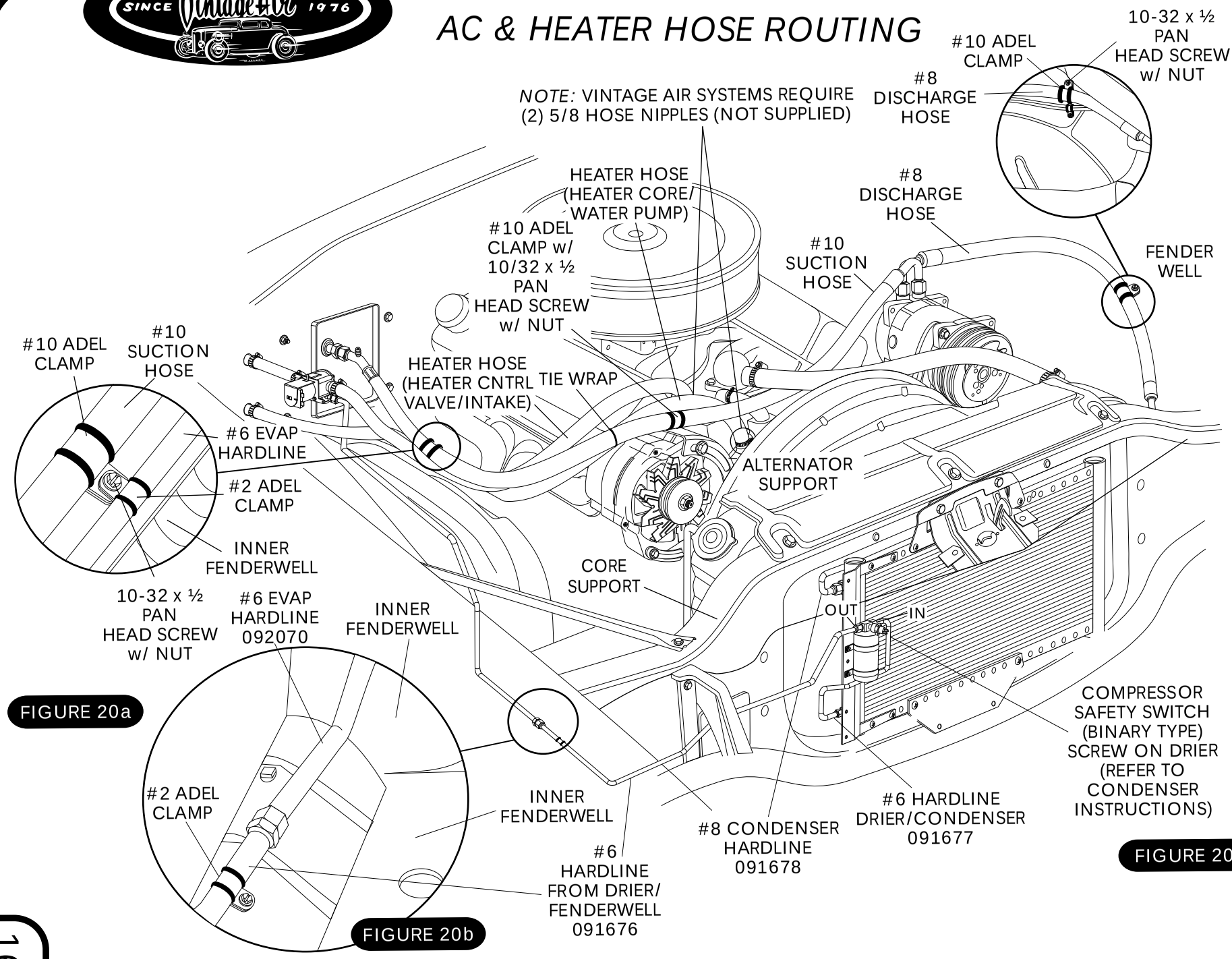

NOTE: VINTAGE AIR SYSTEMS REQUIRE (2) 5/8 HOSE NIPPLES (NOT SUPPLIED)
#10 ADEL CLAMP
10-32 x ½ PAN HEAD SCREW w/ NUT
#8 DISCHARGE HOSE
HEATER HOSE (HEATER CORE/ WATER PUMP)
#10 ADEL CLAMP w/ 10/32 x ½ PAN HEAD SCREW w/ NUT
#8 DISCHARGE HOSE
#10 SUCTION HOSE
FENDER WELL
#10 ADEL CLAMP
#10 SUCTION HOSE
HEATER HOSE (HEATER CNTRL VALVE/INTAKE)
TIE WRAP
#6 EVAP HARDLINE
#2 ADEL CLAMP
ALTERNATOR SUPPORT
INNER FENDERWELL
CORE SUPPORT
OUT
IN
10-32 x ½ PAN HEAD SCREW w/ NUT
#6 EVAP HARDLINE 092070
INNER FENDERWELL
COMPRESSOR SAFETY SWITCH (BINARY TYPE) SCREW ON DRIER (REFER TO CONDENSER INSTRUCTIONS)
#2 ADEL CLAMP
INNER FENDERWELL
#6 HARDLINE DRIER/CONDENSER 091677
#8 CONDENSER HARDLINE 091678
#6 HARDLINE FROM DRIER/ FENDERWELL 091676

FIGURE 20a

FIGURE 20b

FIGURE 20

FINAL STEPS

- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 23, PAGE 18
- ☐ ROUTE A/C WIRES THROUGH 5/8 GROMMENT AS SHOWN ON FIGURE 21a (12 VOLT/ GROUND/ BINARY SWITCH/ HEATER VALVE).
- ☐ INSTALL CONTROL PANEL ASM.
- ☐ PLUG THE WIRING HARNESS IN THE ECU MODULE ON SUB CASE AS SHOWN IN FIGURE 23, PAGE 18 (WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 20 AND 21.)
- ☐ GLOVE BOX INSTALLATION (SEE FIGURE 21)
- ☐ INSTALL UNDERDASH LOUVER ASM (SEE FIGURE 22)
- ☐ REINSTALL ALL PREVIOUSLY REMOVED ITEMS (BATTERY BOX & BATTERY).
- ☐ FILL RADIATOR WITH AT LEAST A 50/50 MIXTURE OF APPROVED ANTIFREEZE AND DISTILLED WATER.IT IS THE OWNER'S RESPONSIBILITY TO KEEP THE FREEZE PROTECTION AT THE PROPER LEVEL FOR THE CLIMATE IN WHICH THE VEHICLE IS OPERATED. FAILURE TO FOLLOW ANTIFREEZE RECOMMENDATIONS WILL CAUSE HEATER CORE TO CORRODE PREMATURELY AND POSSIBLY BURST IN AC MODE AND/OR FREEZING WEATHER, VOIDING YOUR WARRANTY.
- ☐ DOUBLE CHECK ALL FITTINGS, BRACKETS AND BELTS FOR TIGHTNESS.
- ☐ VINTAGE AIR RECOMMENDS THAT ALL AC SYSTEMS BE SERVICED BY A CERTIFIED AUTOMOTIVE AIR CONDITIONING TECHNICIAN.
- ☐ EVACUATE THE SYSTEM FOR A MINIMUM OF 45 MINUTES PRIOR TO CHARGING AND LEAK CHECK PRIOR TO SERVICING.
- ☐ CHARGE THE SYSTEM TO THE CAPACITIES STATED ON THE INFORMATION PAGE (PAGE 4) OF THIS INSTRUCTION MANUAL.
- ☐ SEE OPERATION OF CONTROLS PROCEDURES PAGE 22.

GLOVE BOX INSTALLATION

- ☐ INSTALL GLOVE BOX PROVIDED, SECURE WITH #8 SCREWS THROUGH OEM HOLES. SEE FIGURE 21.
- ☐ INSTALL GLOVE BOX DOOR.

NOTE: IF EQUIPED WITH THE GLOVE BOX LIGHT AS SHOWN BELOW IN FIGURE 21b, MODIFY PLASTIC GLOVE BOX USING TEMPLATE PROVIDED ON PAGE 26.

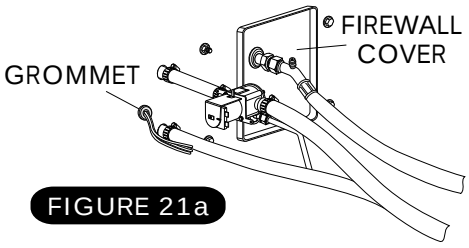


FIGURE 21a

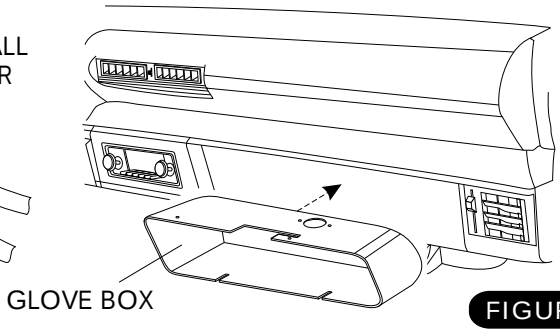


FIGURE 21

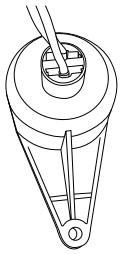


FIGURE 21b

UNDER DASH LOUVER INSTALLATION

- ☐ REINSTALL UNDER DASH LOUVERS USING OEM SCREWS AS SHOWN IN FIGURE 22 BELOW.
- ☐ CONNECT DUCT HOSE TO LOUVERS AS SHOWN IN FIGURE 23, PAGE 18.

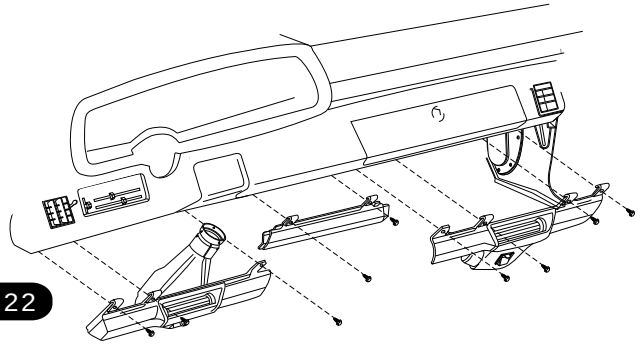


FIGURE 22

CONTROL PANEL & DUCT HOSE ROUTING

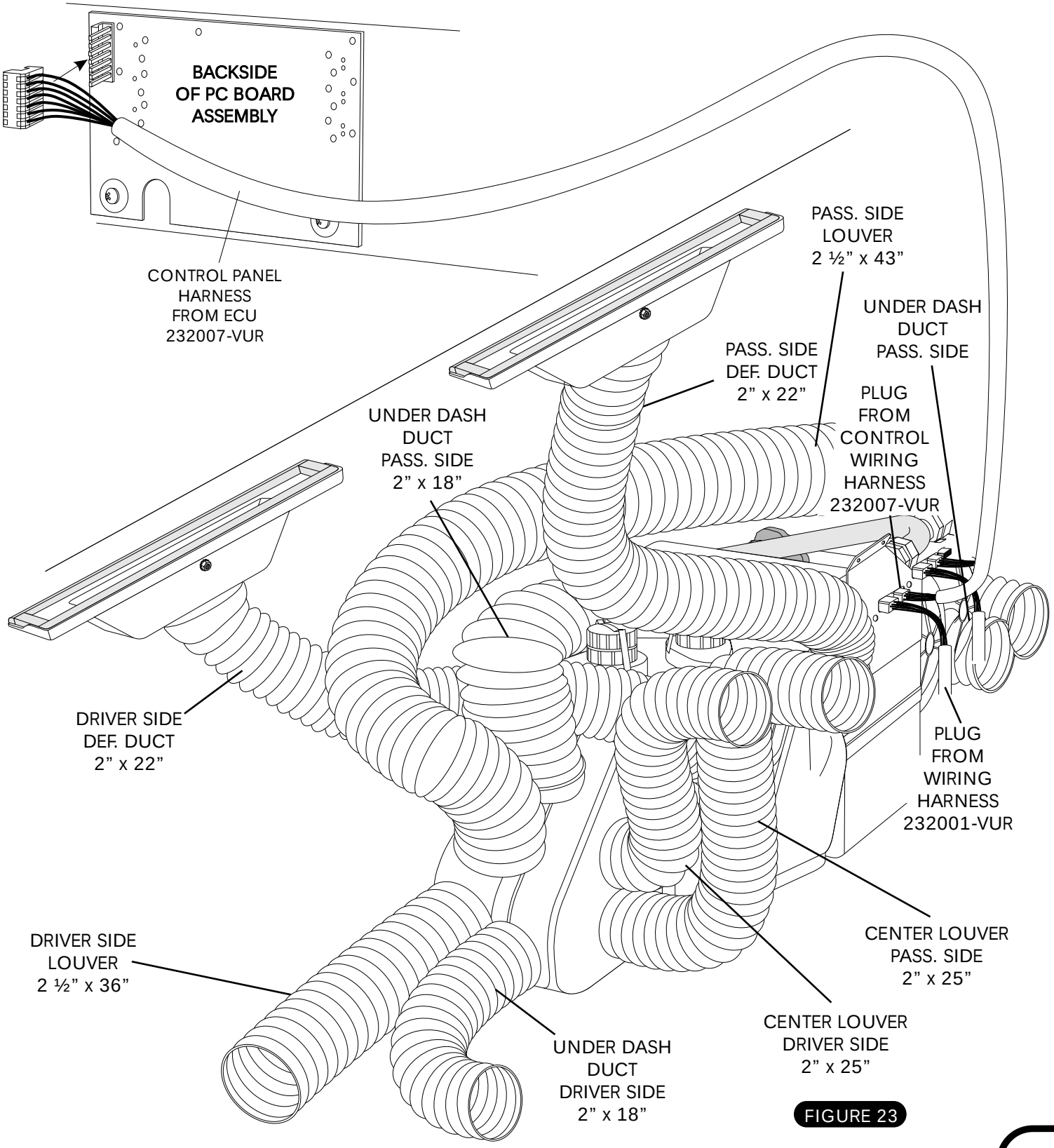


FIGURE 23

EVAPORATOR HARD LINE INSTALLATION

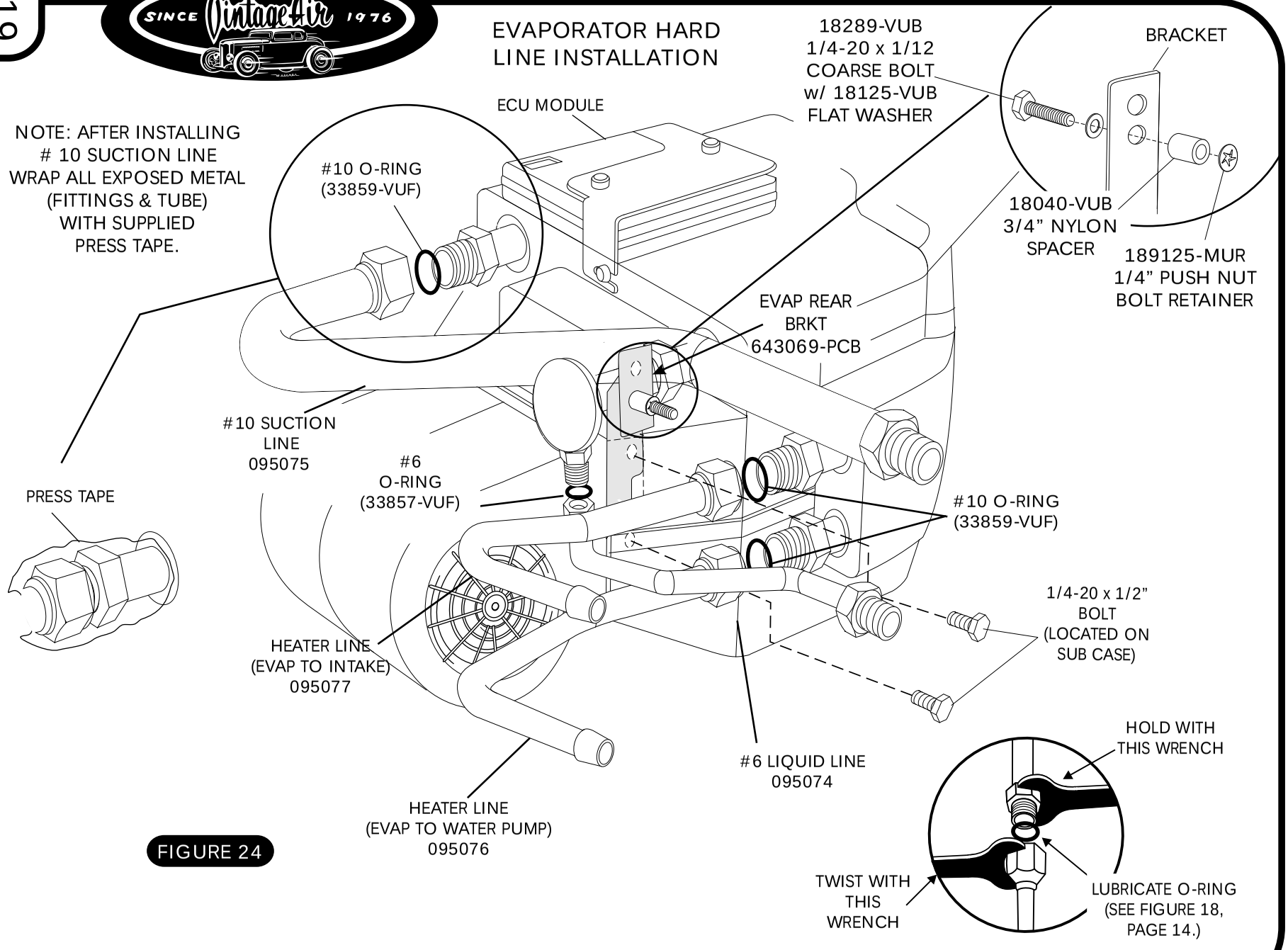
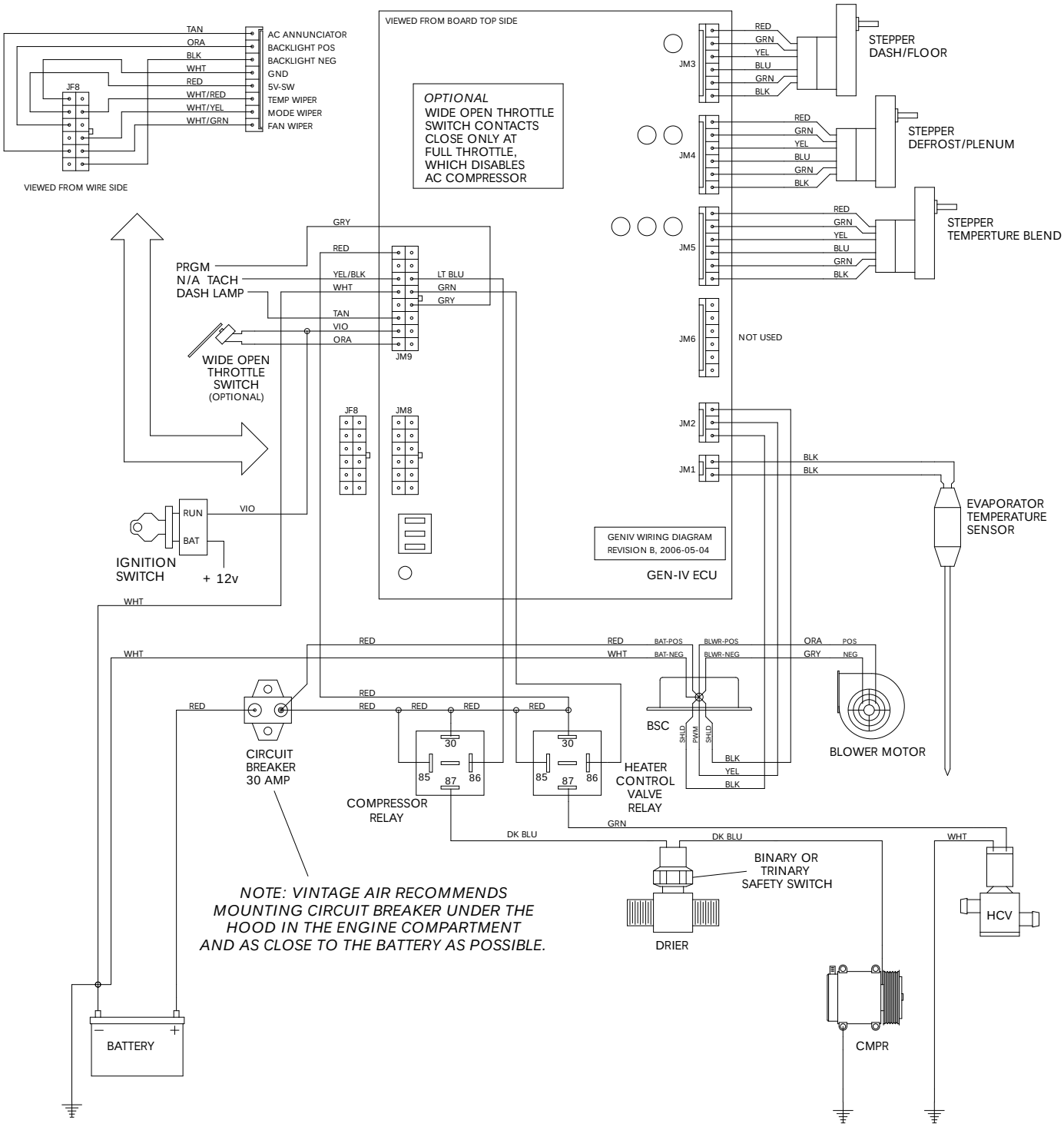
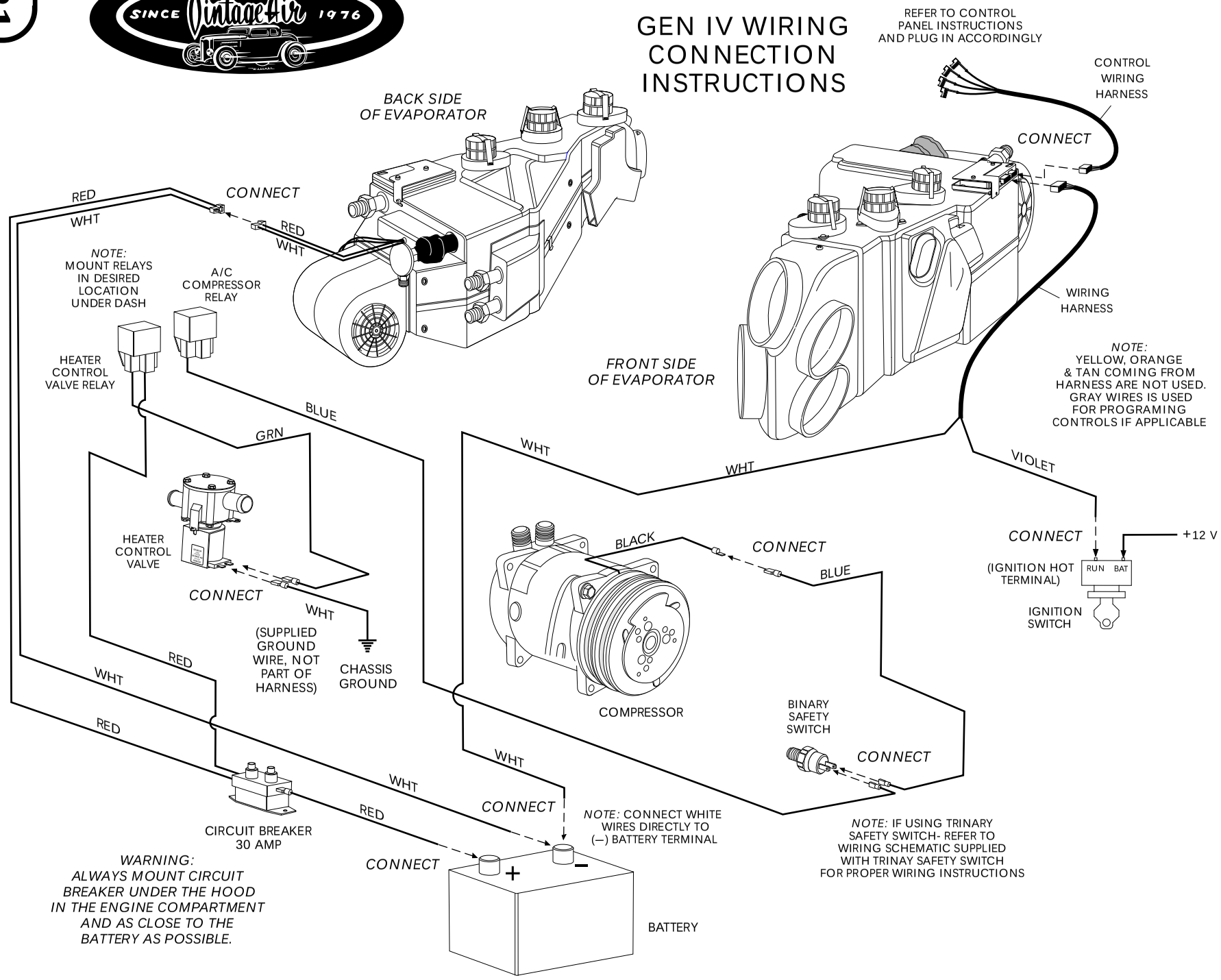

NOTE: AFTER INSTALLING # 10 SUCTION LINE WRAP ALL EXPOSED METAL (FITTINGS & TUBE) WITH SUPPLIED PRESS TAPE.
ECU MODULE
#10 O-RING (33859-VUF)
18289-VUB 1/4-20 x 1/12 COARSE BOLT w/ 18125-VUB FLAT WASHER
BRACKET
18040-VUB 3/4" NYLON SPACER
189125-MUR 1/4" PUSH NUT BOLT RETAINER
EVAP REAR BRKT 643069-PCB
#10 SUCTION LINE 095075
#6 O-RING (33857-VUF)
#10 O-RING (33859-VUF)
PRESS TAPE
1/4-20 x 1/2" BOLT (LOCATED ON SUB CASE)
HEATER LINE (EVAP TO INTAKE) 095077
#6 LIQUID LINE 095074
HEATER LINE (EVAP TO WATER PUMP) 095076
HOLD WITH THIS WRENCH
TWIST WITH THIS WRENCH
LUBRICATE O-RING (SEE FIGURE 18, PAGE 14.)

FIGURE 24

WIRING DIAGRAM



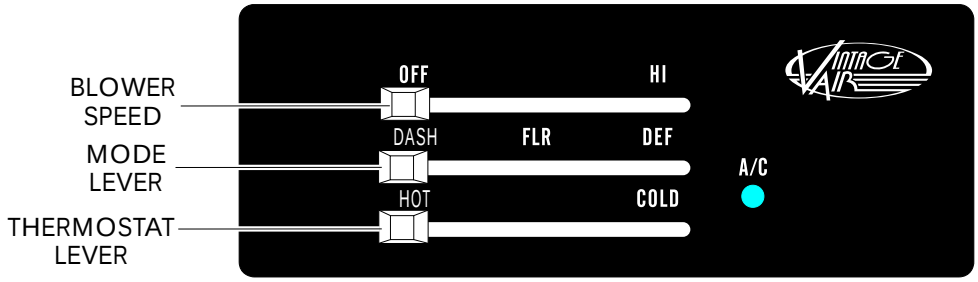
GEN IV WIRING CONNECTION INSTRUCTIONS



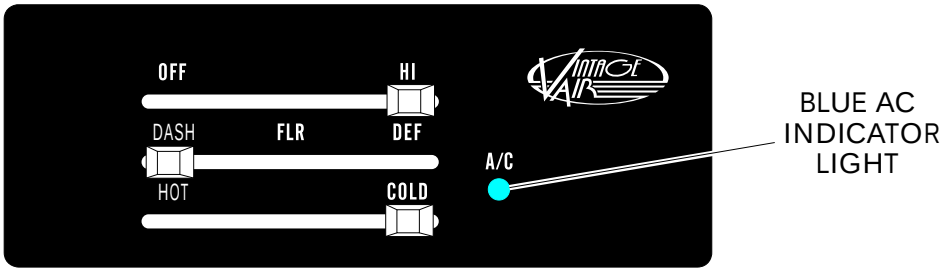
OPERATION OF CONTROLS

NOTE: WHEN BATTERY POWER IS FIRST CONNECTED TO THE ECU, THE COMPUTER GOES THROUGH AN INITIALIZATION SEQUENCE. THIS INITIALIZATION MAY TAKE UP TO 30 SECONDS. DURING INITIALIZATION THE BLOWER WILL NOT OPERATE, BUT THE DOORS INSIDE THE UNIT WILL BE OPERATING. A LOW BATTERY OR DISCONNECTING THE BATTERY MAY ALSO TRIGGER A RE-INITIALIZATION. DURING START UP, A LOW BATTERY MAY DROP BELOW 7 VOLTS, TRIGGERING RE-INITIALIZATION.

SYSTEM OFF



A/C MODE

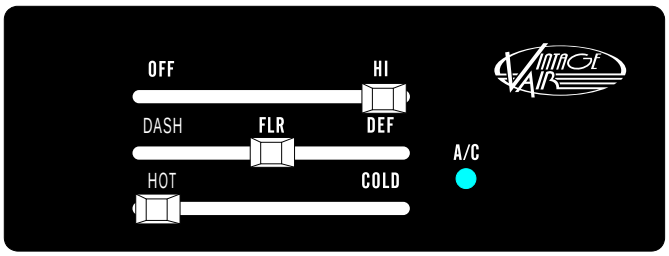


BLOWER SPEED
THIS LEVER CONTROLS THE BLOWER SPEED, FROM OFF TO HI

A/C THERMOSTAT LEVER
IN A/C MODE SLIDE THE THERMOSTAT LEVER ALL THE WAY RIGHT TO THE COLD POSITION, FOR MAXIMUM COOLING. BLUE AC INDICATOR LIGHT WILL COME ON ONLY WHEN AC COMPRESSOR IS ENGAGED (SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

MODE LEVER
SLIDE THE LEVER TO THE "DASH" POSITION

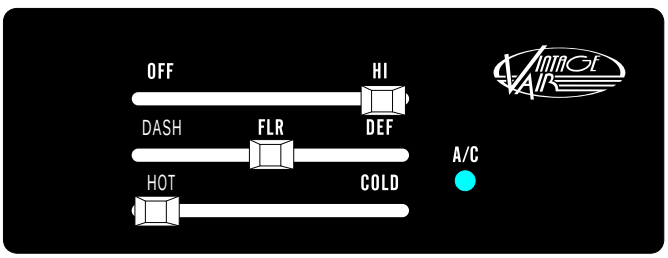
HEAT MODE



A/C THERMOSTAT LEVER
IN HEAT MODE SLIDE THE THERMOSTAT LEVER ALL THE WAY TO THE LEFT TO THE HOT POSITION, FOR MAXIMUM HEATING (SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

MODE LEVER
SLIDE THE LEVER TO THE "FLR" POSITION (SLIDE THE LEVER TO THE LEFT OR RIGHT, TO ADJUST DESIRED DASH/ FLR/ DEF LOCATION

DEFROST MODE



A/C THERMOSTAT LEVER
IN DEF MODE SLIDE THE THERMOSTAT LEVER ALL THE WAY TO THE LEFT TO THE HOT POSITION, FOR MAXIMUM HEATING (SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

MODE LEVER
SLIDE THE LEVER TO THE "DEF" POSITION

TROUBLE SHOOTING INFORMATION

SYMPTOM	*CONDITION*	*CHECKS*	*ACTIONS*	*NOTES*
1. BLOWER STAYS ON HIGH SPEED WHEN IGNITION IS ON	NO OTHER FUNCTIONS WORK	CHECK FOR DAMAGED PINS OR WIRES IN CONTROL HEAD PLUG.	VERIFY ALL PINS ARE INSERTED INTO PLUG. INSURE NO PINS ARE BENT OR DAMAGED IN ECU.	
		CHECK FOR DAMAGED GROUND WIRE (WHITE) IN CONTROL HEAD HARNESS.	VERIFY CONTINUITY TO CHASSIS GROUND WITH WHITE CONTROL HEAD WIRE AT VARIOUS POINTS.	LOSS OF GROUND ON THIS WIRE WILL RENDER CONTROL HEAD INOPERABLE
	ALL OTHER FUNCTIONS WORK	CHECK FOR DAMAGED BLOWER SWITCH OR POT AND ASSOCIATED WIRING.		SEE BLOWER SWITCH CHECK PROCEDURE (CONTACT VINTAGE AIR TECH SUPPORT)
BLOWER STAYS ON HIGH SPEED WHEN IGNITION IS ON OR OFF.		UN-PLUG 3 WIRE BSC CONTROL CONNECTOR FROM ECU. IF BLOWER SHUTS OFF, ECU IS EITHER IMPROPERLY WIRED, OR DAMAGED.	BE SURE SMALL, 20GA. WHITE GROUND WIRE IS CONNECTED TO THE BATTERY GROUND POST. IF IT IS, REPLACE ECU.	
		UN-PLUG 3 WIRE BSC CONTROL CONNECTOR FROM ECU. IF BLOWER STAYS RUNNING, THE BSC IS EITHER IMPROPERLY WIRED, OR DAMAGED.	CHECK TO INSURE THAT NO BSC WIRING IS DAMAGED OR SHORTED TO VEHICLE GROUND. THE BSC OPERATES THE BLOWER BY GROUND SIDE PWM SWITCHING. THE POSITIVE WIRE TO THE BLOWER WILL ALWAYS BE HOT. IF THE "GROUND" SIDE OF THE BLOWER IS SHORTED TO CHASSIS GROUND, THE BLOWER WILL RUN ON HI.	
			REPLACE BSC. (THIS WILL REQUIRE EVAPORATOR TO BE REMOVED FROM VEHICLE.)	NO OTHER PART REPLACEMENTS SHOULD BE NECESSARY.
2. COMPRESSOR WILL NOT TURN ON (ALL OTHER FUNCTIONS WORK)	SYSTEM IS NOT CHARGED	SYSTEM MUST BE CHARGED FOR COMP. TO ENGAGE.	CHARGE SYSTEM OR BYPASS PRESSURE SWITCH .	***DANGER- NEVER BYPASS SAFETY SWITCH WITH ENGINE RUNNING, SERIOUS INJURY CAN RESULT***
	SYSTEM IS CHARGED	CHECK FOR FAULTY A/C POT OR ASSOC. WIRING	CHECK CONTINUITY TO GROUND ON WHITE CONTROL HEAD WIRE. CHECK FOR 5V ON RED CONTROL HEAD WIRE.	TO CHECK FOR PROPER POT FUNCTION, CHECK VOLTAGE AT WHITE/BLUE WIRE. VOLTAGE SHOULD BE BETWEEN 0 AND 5V, AND WILL VARY WITH POT LEVER POSITION.
		CHECK FOR DISCONNECTED OR FAULTY THERMISTOR.	CHECK TWO PIN CONNECTOR AT ECU HOUSING.	DISCONNECTED OR FAULTY THERMISTOR WILL CAUSE COMPRESSOR TO BE DISABLED.
		(CHECK FOR FAULTY PRESSURE SWITCH)	CHECK CONTINUITY ACROSS SWITCH	REPLACE SWITCH
3. COMPRESSOR WILL NOT TURN OFF (ALL OTHER FUNCTIONS WORK)		CHECK FOR FAULTY A/C POT OR ASSOC. WIRING	REPAIR/REPLACE POT/CONTROL WIRING	RED WIRE @ A/C POT SHOULD HAVE APPROX. 5V WITH IGNITION ON. WHITE WIRE WILL HAVE CONTINUITY TO CHASSIS GROUND, WHITE/BLUE WIRE SHOULD VARY BETWEEN 0V AND 5V WHEN LEVER IS MOVED UP AND DOWN.
		CHECK FOR FAULTY A/C RELAY	REPLACE RELAY	
		FOR '55-56 CHEV. CHECK FOR PROPER PANEL CONVERSION. CONTROL LEVERS SHOULD TRAVEL TO WITHIN 1/8" OF BOTH ENDS OF THE SLOTS.	REFER TO INTSRUCTIONS "'55-56 CONTROL PANEL CONVERSION REV B 6 17 05" PDF OR 903055-PCA REV C 8/10/05 OR LATER INSRUCTION MANUAL.	EARLY INSTRUCTIONS ON '55-56 CHEV. DID NOT INCLUDE PANEL MOD PROCEEDURE FOR CONTROL WITH LOWER POT BRACKET OFFSET BACK FROM CASTING. IF LEVERS ONLY TRAVEL 2/3 TO 3/4 UP, THIS PROCEEDURE MUST BE PERFORMED
			REPLACE ECU.	

TROUBLE SHOOTING INFORMATION CONT.

4. SYSTEM WILL NOT TURN ON OR RUNS INTERMITTENTLY	WORKS WHEN ENGINE IS NOT RUNNING, SHUTS OFF WHEN ENGINE IS STARTED. (TYPICALLY EARLY GEN 4, BUT POSSIBLE ON ALL VERSIONS)	NOISE INTERFERENCE FROM EITHER IGNITION OR ALTERNATOR.	INSTALL CAPACITORS ON IGN. COIL, AND ALTERNATOR. ENSURE GOOD GROUND AT ALL POINTS.RE-LOCATE COIL AND ASSOCIATED WIRING AWAY FROM ECU AND ECU WIRING. CHECK FOR BURNED OR LOOSE PLUG WIRES.	IGNITION NOISE (RADIATED OR CONDUCTED) WILL CAUSE THE SYSTEM TO SHUT DOWN DUE TO HIGH VOLTAGE SPIKES. IF THIS IS SUSPECTED, CHECK WITH A QUALITY OSCILISCOPE. SPIKES GREATER THAN 16V WILL SHUT DOWN ECU. INSTALL A RADIO CAPACITOR AT THE POSITIVE POST OF THE IGNITION COIL (SEE RADIO CAPACITOR INSTALLATION BULLETEN). A FAULTY ALTERNATOR OR WORN OUT BATTERY CAN ALSO RESULT IN THIS CONDITION. BATTERY MUST BE IN GOOD CONDITION FOR ALTERNATOR REGULATOR TO FUNCTION PROPERLY.
	WILL NOT TURN ON UNDER ANY CONDITIONS	VERIFY CONNECTIONS ON POWER LEAD, IGNITION LEAD, AND BOTH WHITE GROUND WIRES.	CHECK FOR POSITIVE POWER AT HEATER VALVE GREEN WIRE. AND BLOWER RED WIRE. CHECK FOR GROUND ON CONTROL HEAD WHITE WIRE.	
		VERIFY BATTERY VOLTAGE IS GREATER THAN 10 VOLTS AND LESS THAN 16.	VERIFY PROPER METER FUNCTION BY CHECKING A KNOWN GOOD BATTERY'S VOLTAGE.	

5. LOSS OF MODE DOOR FUNCTION	NO MODE CHANGE AT ALL	CHECK FOR DAMAGED MODE SWITCH OR POT AND ASSOCIATED WIRING		
	PARTIAL FUNCTION OF MODE DOORS	CHECK FOR OBSTRUCTED OR BINDING MODE DOORS		TYPICALLY CAUSED BY EVAPORATOR HOUSING INSTALLED IN A BIND IN THE VEHICLE. BE SURE ALL MOUNTING LOCATIONS LINE UP AND DON'T HAVE TO BE FORCED INTO POSITION.
		CHECK FOR DAMAGED STEPPER MOTOR OR WIRING		

6. BLOWER TURNS ON AND OFF RAPIDLY	BATTERY VOLTAGE IS AT LEAST 12V	CHECK FOR AT LEAST 12V BETWEEN GREEN HEATER VALVE WIRE AND CHASSIS GROUND.	INSURE ALL SYSTEM GROUNDS AND POWER CONNECTIONS ARE CLEAN AND TIGHT.	
	BATTERY VOLTAGE IS LESS THAN 12V	CHECK FOR FAULTY BATTERY OR ALTERNATOR	CHARGE BATTERY	SYSTEM SHUTS OFF BLOWER AT 10V. POOR CONNECTIONS OR WEAK BATTERY CAN CAUSE SHUT DOWN AT UP TO 11V

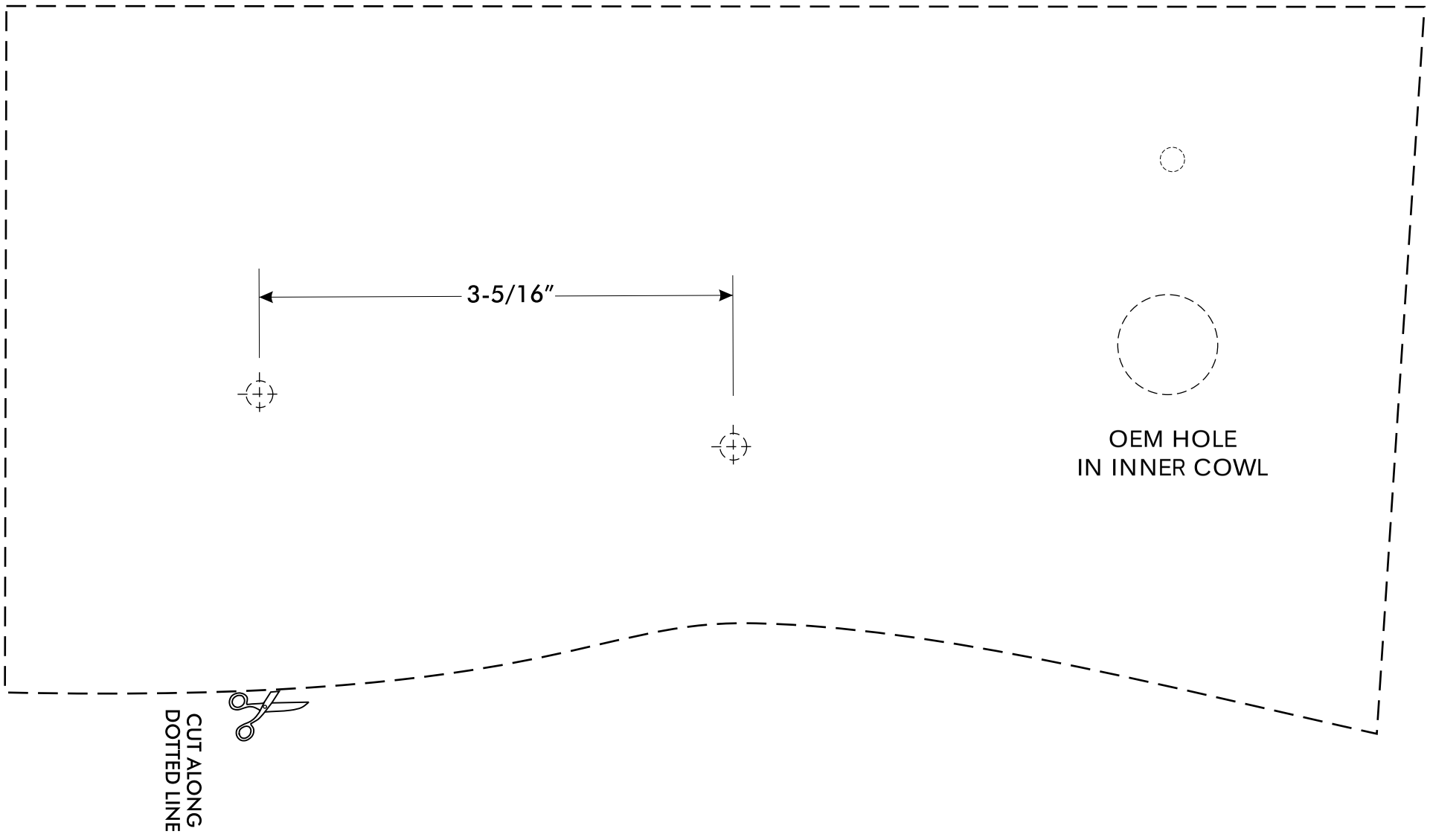
7. ERATIC FUNCTIONS OF BLOWER, MODE, TEMP, ETC.		CHECK FOR DAMAGED SWITCH OR POT AND ASSOCIATED WIRING	REPAIR OR REPLACE	

8. WHEN THE IGNITION IS TURNED ON, THE BLOWER MOMENTARILY COMES ON, THEN SHUTS OFF. THIS IS WITH THE BLOWER SWITCH IN THE OFF POSITION.		THIS IS AN INDICATOR THAT THE SYSTEM HAS BEEN RE-SET. BE SURE THE RED POWER WIRE IS ON THE BATTERY POST AND NOT ON A SWITCHED SOURCE. ALSO, IF THE SYSTEM IS PULLED BELOW 7V EVEN FOR A SPLIT SECOND, THE SYSTEM WILL RE-SET.	RUN RED POWER WIRE DIRECTLY TO BATTERY.	

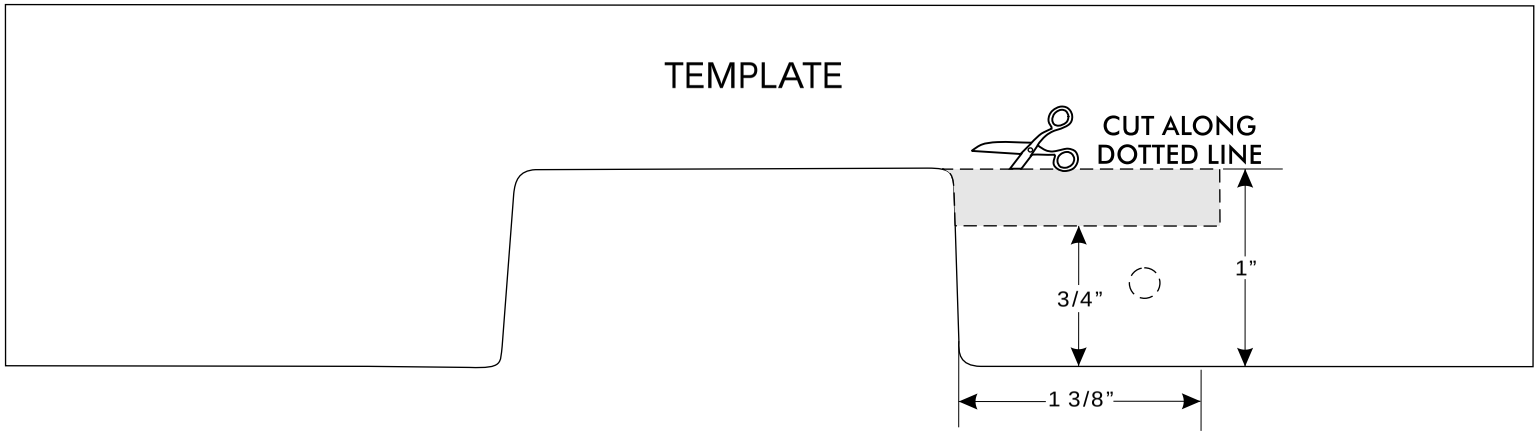
9. BACKLIGHTING ON CONTROL PANEL ALWAYS ON.	VINTAGE AIR SUPPLIED PANELS ONLY.	TAN WIRE IN MAIN HARNESS IS NOT CONNECTED TO 0-12V GAUGE BACK LIGHT WIRE.	CONNECT TO GAUGE BACK LIGHT WIRE (0-12V) WHICH WHICH CONTROLS DIMMING OF PANEL BACK LIGHT	TAN WIRE IS ONLY USED ON SYSTEMS WITH ENTIRE CONTROL PANEL SUPPLIED BY VINTAGE AIR.

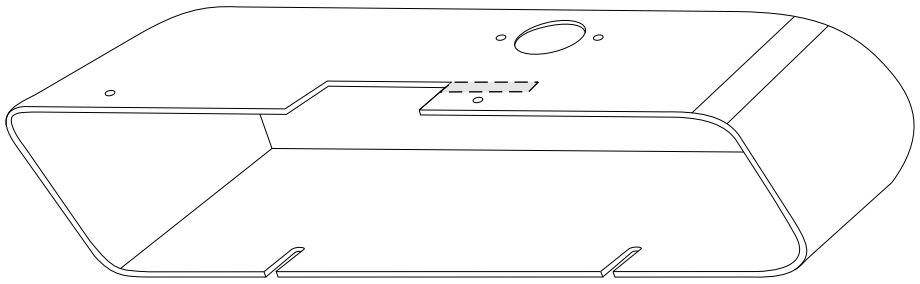
10. BACKLIGHTING ON CONTROL PANEL ALWAYS OFF.	VINTAGE AIR SUPPLIED PANELS ONLY.	TAN WIRE IN MAIN HARNESS NOT CONNECTED.	CONNECT TO GAUGE BACK LIGHT WIRE (0-12V) WHICH WHICH CONTROLS DIMMING OF PANEL BACK LIGHT	

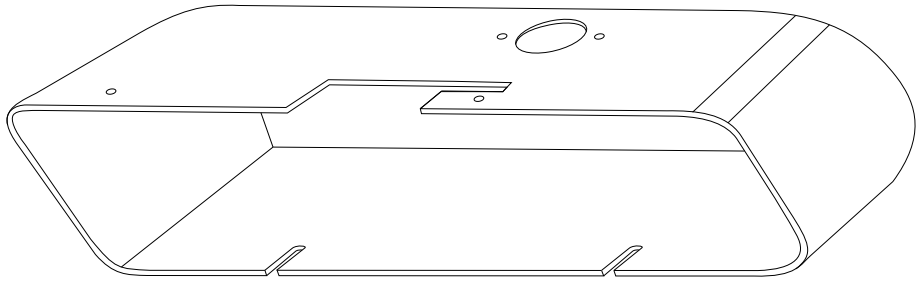
EVAPORATOR BRACKET TEMPLATE



GLOVE BOX LIGHT TEMPLATE







1970-78 CHEVY CAMARO *w/ AC GEN IV*

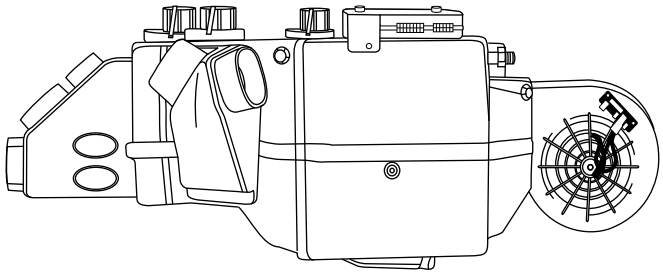
EVAPORATOR KIT
565070

EVAPORATOR KIT PACKING LIST

No.	QTY.	PART No.	DESCRIPTION	
1.	1	762170	1970-78 CAMARO w/ AC GEN IV EVAP. SUBCASE	_____
2.	1	781172	1970-78 CAMARO w/ AC GEN IV ACC. KIT	_____

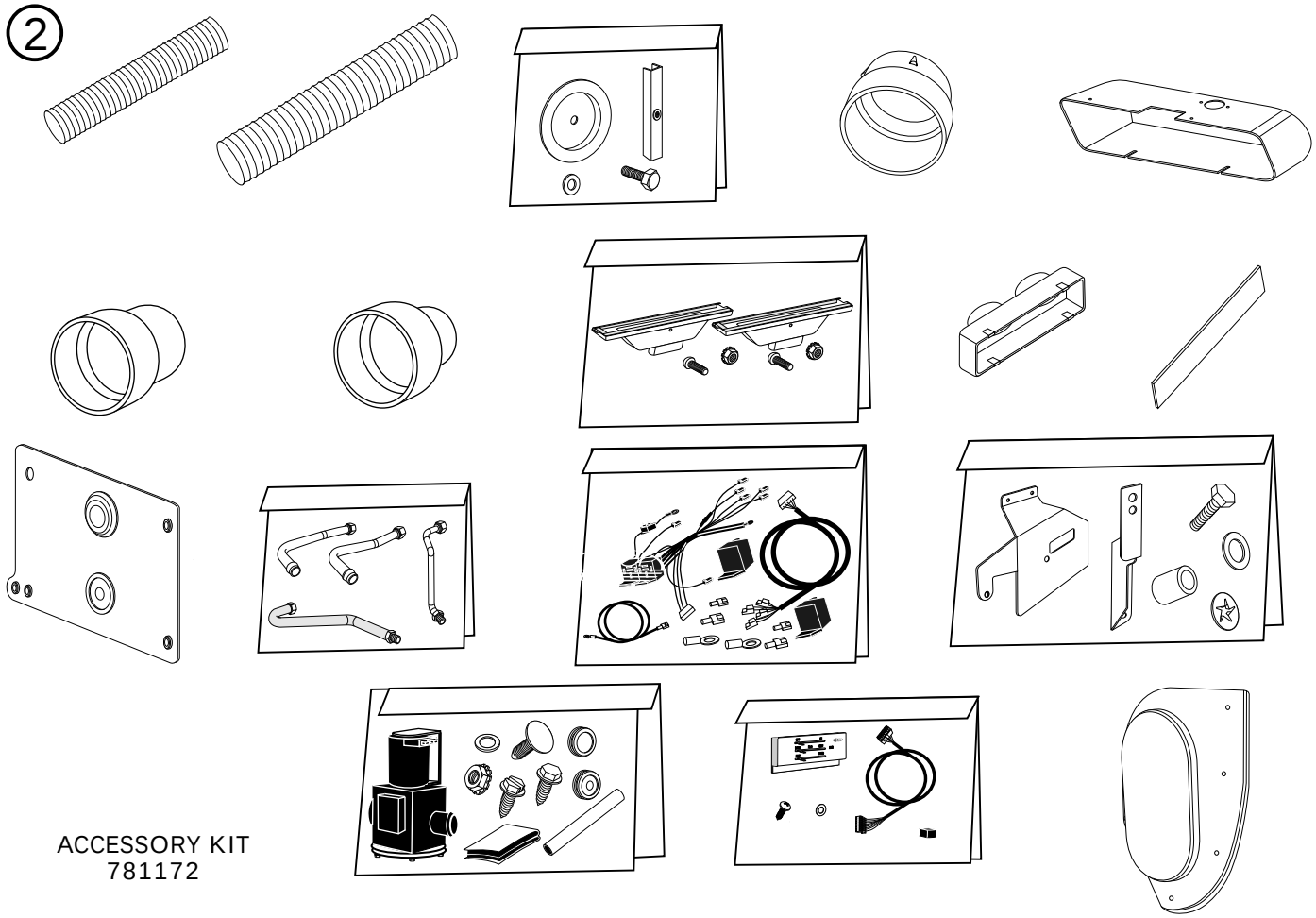
CHECKED BY: _____
PACKED BY: _____
DATE: _____

①



1970-78 CAMARO *w/ AC* GEN IV EVAP. SUB CASE
762170

②



ACCESSORY KIT
781172

NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES.
REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES